SCHOOL TRAINING OF GIFTED CHILDREN

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SCHOOL TRAINING OF GIFTED CHILDREN

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By Henry Herbert Goddard
Professor of Abnormal and Clinical Psychology
The Ohio State University

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A potter, having power over his clay, does not take advantage of especially fine clay merely to hasten his processes. Rather, he spends the greater pains upon the finer clay, that he may produce vessels the more nearly approaching perfection. Too little has the wisdom of the potter been applied in our schools. Materials obstinate and plastic have been forced into the same molds. Extraordinary pains have been taken with subnormal children, the while gifted children, when not merely held in lockstep with slower students, have been advanced through grades till they have found themselves unhappily out of touch with their rightful contemporaries. But there is well under way a movement for the special training of gifted children through the enrichment of courses; and nowhere, perhaps, has this movement been carried farther or been more successful than in the school system of Cleveland, Ohio. There Dr. Goddard has for six years visited and studied the classes for gifted children. His observations of practice and his contributions to theory are presented in this volume. That it will bring more power to teachers is the hope of author and publishers

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TO

MRS. BENJAMIN PATTERSON BOLE

IN APPRECIATION OF HER DEVOTION TO
THE EDUCATION OF GIFTED CHILDREN

PREFACE

THE psychology of gifted children has been extensively studied. The theory of the special education of gifted children has been discussed frequently. Nowhere have special classes been described as they actually exist, on a large scale.

This book attempts to give a picture of public-school classes for gifted children actually at work. The study covers a period of five years. From a study made by Mrs. Dortha Williams Jensen, it would appear that the city of Cleveland has made the most thoroughgoing and progressive experiment in the education of gifted children, of any city in the United States. This statement is based upon the following facts derived from the study referred to.

First, there are only three cities having *more* classes than the city of Cleveland. Second, these cities all report having the same curriculum for gifted children as for their regular classes. Third, two of these three cities report their aim to be speed rather than enrichment of the course. Fourth, Cleveland is the only city reporting that the teacher is given practically unlimited freedom to work out the problem. Fifth, Cleveland aims at enrichment only and thereby provides a wider range of enrichment than is found elsewhere.

The writer's opportunity to study these classes is probably unique. Early in 1922 a group of public-spirited women of Cleveland organized themselves into a committee to promote the education of gifted children. The writer was asked to serve as their adviser. It was arranged that he should spend two days a month in Cleveland in connection with this work.

Discovering that a special class of gifted children had previously been established in the public schools, the committee decided to call upon Superintendent R. G. Jones and Assistant Superintendents Herbert D. Bixby, in charge

of elementary education, and inquire if there was any way in which a committee of this kind could be of assistance to the gifted-child movement. Mr. Bixby readily accepted the proffers made, and a coöperative work was begun which has continued to the present time. Mr. Bixby found many ways in which such a committee could be useful. The members of the committee, on their part, were glad to see the work progress and to help in any way possible. They were able to do many things that helped make the experiment a success but which were outside the province of the school system. For example, they were able to secure a fund from which could be bought special books and apparatus that could not be provided from the regular budget of the public schools.

The committee was allowed to visit the classes and make observations. Thus the writer has spent two days a month in these classes for the past five years. He has been merely an observer, neither taking part in the formulation of policies nor interfering in any way with the program as outlined by those in authority. He has been granted the privilege of giving tests to the children to ascertain their status and progress. For the most part, however, he has been merely an interested observer. For the opinions expressed in this book, the views of education, and the interpretation of policy he alone is responsible. For the policies themselves, the methods of instruction, and the details of administration of the classes, the credit is entirely due to the regular school officers.

In anything that the reader may find in the book that sounds like criticism, he must understand that the writer is merely expressing an opinion; that in approving certain methods and principles, he is commenting upon the work of others.

The literature on gifted children is already extensive, numbering more than five hundred titles in English alone.

It is true that much of this relates to details connected with the problem, such as measuring the intelligence of gifted children. Much of it relates to the discussion of problems connected with the education of the gifted. There are a few descriptions of single classes established for experimental purposes. Most of the literature is in periodical articles, there being very few books. There is at present no book describing the details of a complete system of special classes for gifted children, devoted to enrichment and not speed and where there has been the utmost freedom on the part of the teacher to make experiments in the way of conducting the work in managing the classes.

This book has been written, as has been said, with the primary object of promoting the movement for special classes for gifted children by enrichment only. Probably at least ten per cent of school children need the special class. It is in the interest of these children that the writer has attempted to describe what *is actually being done* and, consequently, what may be repeated in other cases. With such a purpose, there has been no attempt to fill the book with statistical studies. This has been well done by others, notably by Terman in his monumental work on the "Genetic Studies of Genius." A few statistics and a few samples of work will be found in Part II.

It is hoped that many superintendents will be encouraged to start these special classes and thus a nation-wide movement will result — a movement whereby the high intelligence of this large group of children will be conserved and the children will be so educated as to become of the utmost possible help in a solution of our great civic problems.

The writer is greatly indebted to Mrs. Benjamin Patterson Bole, of the committee referred to, to R. G. Jones, Superintendent of Schools, to Assistant Superintendent H. D. Bixby, Assistant Superintendents A. C. Eldridge, Charles H.

Lake, and H. M. Buckley, and former Assistant Superintendent Frank P. Whitney, for the splendid opportunity to study the problem; to the supervisors, principals, and teachers, for many courtesies; and to Mrs. Pearl Bowers for help in acquiring the information, giving tests, and securing data on the homes and other important matters.

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PART ONE

THE CLASSES AND EQUIPMENT

SCHOOL TRAINING OF GIFTED CHILDREN

CHAPTER ONE

A Bit of History

The history of the movement for special consideration for gifted children in the public schools covers sixty years. This is divided into three periods. First, the period of *flexible promotion*, beginning with the work of Dr. William T. Harris in the St. Louis schools about 1867. During the next thirty years progressive educators were concerned with various plans by which individual children who could or did work faster than others, might be more rapidly promoted.

The second period may be called the period of *rapid-advancement classes.* This began with the present century and brought about the first real recognition of the gifted pupils as such. Up to that time there had been no attempt at class teaching of these children, but, as stated, various plans had been formulated and tried by which children who had done more work could be more quickly promoted. During this second period the children were picked out from their regular grades and placed in special classes, where they completed two years' work in one year, or three years' work in two, the emphasis being placed on the time-saving element. A number of cities had one or more of these rapid-advancement classes. The argument and emphasis during this period was always to save time.

The third epoch is the period of *enrichment.* It began in the public schools of Cleveland, Ohio, about 1920. The emphasis is not placed upon saving time, but upon keeping the child happily employed with work that is educative both because it is interesting to him and because it challenges his capabilities by calling for his best efforts continually. It is

the first system to recognize, to any degree, the fact that in the education of gifted children we are facing a *new problem;* and that the new problem must be solved by a *new method,* not by an adaptation of an old method.

Both the "flexible promotion" and the "rapid-advancement" classes were merely attempts to adjust the machinery of the school to fit the child who, because of his different type of mind, was becoming a disturbing problem. Neither of these methods has ever proved entirely satisfactory and never can be satisfactory, because they do not recognize the nature of the gifted child. The usual methods and curriculum of the public school are the result of a trial-and-error procedure extending over a great many years, a procedure which practically recognizes no differences in intelligence between children, and consequently has been developed to fit the largest group; namely, the so-called normal or average child. This system never did and never can fit either the defective or the gifted child. The best results with gifted children will be obtained only by recognizing the gifted child, the bright child, as a new problem requiring a special new type of education, and by providing that education. No better proof of this is needed than the experience with the defective child in the schools.

Many years ago, teachers of the feeble-minded were using the same courses of study that were used for normal children, the only difference being that the feeble-minded were allowed more time. Allowing more time was their first attempt to "adjust." This was a failure, because feeble-minded children cannot do the work of normal children. The next adjustment was more leniency in the requirements in the various subjects. That attempt at adjustment has gone on until today. We have, with few exceptions, a system of makeshifts for the feeble-minded in the public schools. In only a few places has it been recognized that the feeble-minded constitute a new

problem, which educators have attempted to solve, not by making one concession after another from normal education, but by recognizing the new problem and devising a new system and new methods. It ought to be possible to learn a lesson and not repeat the same system of errors in our dealing with the gifted child. We shall discuss the education of the gifted child as a new problem in a later chapter.

We were many years in getting to the point where we recognized that the gifted child was worth considering at all. We spent thirty years trying to adjust him to a promotion system. We have spent twenty years trying to rush him rapidly through the grades. A curriculum that is not fitted to the type of mind possessed by the gifted child, we attempted to adjust to his needs by giving him twice as much of it! I remember in the old normal-school days, if a student was not mathematically inclined and could barely make the grade with much difficulty, we gave him two classes in mathematics instead of one. In other words, if a horse can barely pull the load, double the load — perhaps he will get on better! It is not our purpose to discuss the reason why these other attempts were unsatisfactory, but one point is worth considering because it still appeals to many people; namely, the time-saving element itself.

It is argued that, if a child could get through college at sixteen, he could be through professional school and be graduated as a doctor or a lawyer or a minister when he was twenty, and that he could then get his start in business much sooner and be ready to marry and settle down — thus removing some of the problems that follow from a late start in his profession and late marriage. But however desirable all this might seem to be, it has been proved conclusively that the ten-year-old boy is out of place in high school, the thirteen-year-old boy is out of place in college. In other words, the rapid promotion and early graduation is a will-of-the-wisp which is not

worth chasing. The period of childhood and youth up to manhood and womanhood seems to be required to prepare the individual for the more serious duties of adult life, and it does not seem very reasonable to expect that, with the increasing complications of civilization, the preparation for adult life can be shortened. Rather, it would seem that it ought to be lengthened. Be that as it may, the special classes for gifted children in the city of Cleveland are run on the plan, not of rapid progress, but of greater enrichment; or, better yet, they are based very largely on recognition of the fact that we are dealing with a new problem which must be solved entirely on its own merits. The problem that is being worked out is, "How can a child with exceptional ability be most correctly and effectively educated?" In the process, there is no hesitation in using any of the machinery available from the regular school system. Indeed, the regular curriculum is being followed; that is to say, each group or grade does in the course of a year the work prescribed for that grade. The children do their work in their own way and in their own time, and of course they do a great deal more than the regular grade work.

Those familiar with rapid-progress classes will recall that they have generally been taken from the higher grades. Classes have been formed by taking, for example, the upper quarters of the fifth, the sixth, and the seventh grades. Rarely has this work ever been carried below the fifth grade. In the Cleveland schools, while the work began in the fourth and fifth grades, gifted children are now often picked from the first grade. Thus these bright children do not wait for recognition until they have learned habits of idleness by being forced to mark time for three, four, or five years; rather, they are given their opportunity at the very beginning.

The first class for this type of work was started in Cleve-

land under the supervision of Miss Florence A. Hungerford, General Supervisor, in October, 1921, in the Denison School, of which Miss Katherine Lang was principal. Miss Margaret Kirkland was the teacher placed in charge of the class, which consisted of about twenty-five pupils selected from the fourth, fifth, and sixth grades.

The following year five more classes were started in the schools. There are now fourteen classes in the elementary school, with 372 pupils, and twelve in the high school, with about 300 pupils — a total number of somewhat more than 600 children.

The following is the beginning and the organization in June, 1927:

Denison: Begun October, 1921; Miss Margaret Kirkland, teacher 4th, 5th, and 6th grades. Reorganized September, 1923; Miss Greiser, teacher 2d and 3d grades. Now in Junior High. Present group 5th and 6th grades.

Gordon: October, 1922; Miss Edna Voldan, 3d, 4th, and 5th grades. Now in Junior High.

Milford: October, 1922; Miss Haesley, 2d and 3d grades. In 1923 Miss Short took class. Discontinued this year.

Hough: October, 1922; Miss Dewitz, 2d and 3d grades. Transferred to other schools.

Doan: September, 1923; Miss Vail, organized with 2d, 3d, and 4th grades. Now 5th and 6th grades.

Miles Standish: September, 1923; Miss Freeman, 2d, 3d, and 4th grades. Year later class moved to Doan and Miss Walsh took charge until last year, when they entered Junior High.

Rosedale: September, 1924; Miss Riley, 5th and 6th grades. Now in Junior High.

Miles: November, 1922; Miss Colquhoun, 2d, 3d, 4th, and 5th grades in Junior High. Now Miss Norris in charge of new class organized in 1924. At present 4th, 5th, and 6th grades.

Washington Park: September, 1925; Miss Halleran, 1st, 2d, and 3d grades.

Wade Park: December, 1924; Miss Spellman, 1st, 2d, and 3d grades. Miss Watson took class for a semester. She was followed by Miss Boch, who now has the class.

Older Class (Wade Park): October, 1925; Miss Breyer, 4th, 5th, and 6th grades.

Landon: February, 1926; Miss Treneny, 1st, 2d, and 3d grades.

Chesterfield: February, 1927; Miss Reilly, 3d, 4th, and 5th grades.

Clark: February, 1927; Miss McAlpin, 1st and 2d grades.

Thomas Jefferson Junior High: February, 1925; 7A. Now have 9A, 9B, 8A, 8B, 7A, and 7B.

Fairmount Junior High: 1926; two classes 7B's. At present three classes: two 7B's, one 7A.

CHAPTER TWO

We Visit a Special Class for Gifted Children

I think I can best indicate what we saw if I divest myself of my experience and study of education, and describe the situation as it would probably appear to the average visitor.

It was a thrilling moment when the principal of the school led us to the room where the special class for gifted children was held. We were expecting to see twenty-three young geniuses at work. We were expecting to see a teacher who was capable of teaching geniuses. Our imagination was incapable of picturing what it would be like, and our ingenuity was taxed to explain what we saw.

The room made me think of a boys' and girls' camp on a rainy day, except that the sun was shining outside and everything was bright and pleasant. There were tables and chairs and bookcases; an aquarium with fish and other inhabitants; a vivarium with toads and frogs and snakes and turtles; window boxes with growing plants; and many other things, all interesting but not suggesting school. I could see that the room had once been used for a schoolroom because there were blackboards around two sides. But the writing on the board did not help me. There were no arithmetical problems; there were no English sentences diagramed, but there were two or three pictures, as though somebody had been trying to illustrate something, and there were some diagrams, as though some one had been trying to design something. Although my watch said a little past nine o'clock, I thought we must have happened in at recess time. There seemed to be no order. The children were not sitting in rows. They were not even sitting in orderly arrangement around the tables. There was no recitation going on. Some children were sitting at one table, some at another; one boy was at the typewriter; a girl was looking up something in the

dictionary; two or three children were helping themselves to books out of the bookcase; and the teacher was sitting in a little chair in the far corner of the room, with three or four boys and girls sitting around her.

While I was taking all this in, several boys jumped to bring us chairs and the teacher came forward to greet us. She told us that the little group she had been sitting with were just finishing their plans for dramatizing something that they had been interested in. Then, turning from us, she said in a quiet, pleasant, natural voice, "Children, are you ready to report on the Egyptians?" The effect reminded me of the common experience of the mother who can sleep through all kinds of noises and commotion undisturbed, but the instant the baby rustles a little in his crib, is wide awake and alert. Every one of these children had been occupied in his own pursuits. I expected that the teacher would tap a bell when she wanted attention. I found there was no bell in the room. She could have tapped on the desk with a ruler or a pencil, probably, but I found that this was never done. Whenever the teacher said, "Children, do you want to do so and so?" every child heard and responded, though a few seconds before he knew nothing of what the teacher was doing or saying or what part of the room she might be in.

I looked at the teacher with profound admiration for her discipline and control of the school and wondered how long it had taken her to train them to such ready response. I was soon to learn that I had not begun to fathom the mystery. It was not control, or discipline, or training. It was only the natural result of a natural method.

In response to the teacher's suggestion, the children, almost before we realized it, had seated themselves about a table. I did not think it was a good arrangement for a recitation because some of the children were not facing the teacher, but I was beginning to realize that I was in a strange school and

I must try not to be surprised at anything. The teacher was sitting at one side of the room and we visitors at the other. For the first time since we came into the room, everything was perfectly still for a few seconds, but I had heard no bell taps nor had I heard the teacher tell them to "get quiet." However, I was waiting to hear her say, "William (or John or Mary), you may recite." No such thing. I was watching the teacher; she did not seem to be getting ready to do anything. The next instant one of the children, sitting at the end of the table, who seemed to be a sort of moderator for the occasion, said to the rest of the children, "Who is ready to tell something about the builders of the pyramids?" Two or three hands were raised and the boy said, "All right, William," and William began to tell what he had read. Every other child listened with the keenest attention. What William was telling appeared entirely new to many of the children, while some showed by the smiles on their faces, or the nod of the head, that they had read the same thing. Then I found that this was no textbook work in history. They had become interested in the pyramid builders and had ransacked all the supplementary histories, encyclopedias, and everything they had that was available, either in the school or in the public library, and each was bringing his contribution. It was very interesting, and I had no doubt that it was very valuable; but I wondered how it fitted in with the curriculum, the regular course of things. To be sure, children could spend all their time in fascinating stories of history, but when would they learn their multiplication tables? Or, as one teacher said to me in regard to one of these classes, "Yes, it is wonderful what they do, but they really ought to be getting their English."

Before the children were quite through with their pyramids, a young woman entered. The boy chairman announced that they would finish their discussion at another time. Again

I looked to see what the teacher was going to do. She came across the room and began a conversation with us. The next thing I knew (I never did know how it happened), the children were sitting in their chairs in a circle, and the lady who had just entered was talking to them in French. This was the hour for French. Soon, two or three children were in the center of the circle, in various attitudes, going through various movements and saying various little speeches in French. I could not understand it all, because they talked too fast. But I discovered that they were dramatizing something that they had read in French. When they were through with this and some other exercises, they sang one or two songs in French, and the French teacher departed.

Next occurred something that reminded me a little of school days, although not very much like it. Four or five children were standing around the teacher and I heard one of them say, "I don't understand this point about the division of fractions," and I thought, now I shall have a chance to see the teacher at work in her own field. But no, the child's question was immediately answered by two or three little girls, who said, "Oh, may I show him?" The teacher said, "Yes, certainly." They all went to the blackboard and were instantly oblivious of everything else in the room while one of the girls showed the boy the explanation of his difficulty and the other two girls looked on to see that it was done correctly, or perhaps offered a suggestion here or there. Very pretty, I thought, but still I wondered how far that could be carried.

While this was going on at the board, the teacher was talking with two or three other children about fractions. After a while the fractions seemed to be settled and the teacher said, "Shall we talk over your stories?" "Oh, yes," said several of the children, and immediately they gathered around in chairs, the teacher sitting down in the circle with the children. "Who is ready? All right, Mary." And Mary stood up

and read a page or two of her own composition. It was an account of the most interesting experience that she had ever had. When she finished, several hands went up. She indicated one boy, who stood up and said, "Mary, I don't think you read distinctly enough. It was hard to hear you." Mary accepted the criticism and made no defense. Then another and another and another had some criticism to make. Some of them were rather drastic and I felt a good deal of sympathy for Mary, but she didn't need it. She took everything pleasantly, and finally the criticisms were finished. The teacher remarked, addressing the children, "Your criticisms have been for the most part good. You have picked out things that Mary needs to improve upon, and Mary *has* improved. Don't you think so? Yes, Mary, that was very nice and much better than you have ever done before."

Again I wondered, as I had wondered at nearly everything that I was seeing, whether this on the whole was good? It seemed as though it was the teacher's business to criticize. Children expect criticism from the teacher. That is what she is for. They accept it, as they must. But criticism from other children! — is it not likely to arouse a great deal of animosity and make trouble generally? Anyway, is it reliable? What do other children know about what is right and what is not? True, the children seemed to think it all right; even when I thought it was very harsh, the child who was criticized showed no sign of resentment. Moreover, it is a judgment of one's peers, is it not? And yet the teacher was there to correct any errors of judgment or any mistakes that might be made. Perhaps it is all right; I'll have to think it out.

By the closing time for the morning session, I had so far caught the spirit of the work that I was not surprised to see the children go quietly, without any ringing of bells or giving of commands, and get their wraps, ready to go home for their

lunch. Indeed, I had so far entered into the spirit of this natural automatic working of things, that I was even surprised to find the children standing in line at the door, waiting for the signal to pass out; and then I realized that there was no inconsistency in this. In the room, each had been an individual with his own problems, working thoroughly in coöperation with a few others; but now they became part of the great mass movement, and order and regularity were of the first importance. Therefore, they stood in line and marched out when their turn came. I was gratified to note that even here there were no unnecessary and unnatural restrictions. While the line waited, the children were reasonably quiet and orderly, but there was no punishment or correction if a child spoke to his neighbor. If he had forgotten something, he quietly left the line and went to get it, and this was not accounted a misdemeanor. He was not even scolded for forgetting.

The great event of the afternoon was a rehearsal for a circus. The children imitated animals, organized a play, a dance, and the various other circus features. It was entirely their own suggestion; they made their own costumes and took the parts that they wished to take or could agree upon. What occurred on this day was the rehearsal; the real circus was to come several days later. I could not help thinking that all the public school teachers that I had ever had, and probably a good many teachers who are now teaching, would think that the happenings of the whole day were like a circus; that is, the forenoon as well as the afternoon. I wondered whether a great many of those who might provisionally reconcile themselves to the forenoon program would not draw the line at this afternoon performance of the circus. Of course it is nice for the children to have fun, and perhaps this is one of the possible ways of solving the problem of the gifted child. Let him do his work in the forenoon and play in the afternoon.

A special class composed of children from first, second, and third grades, dressed for a circus. The children themselves planned the circus, chose their own parts, and made their own costumes. Note the camel, the giraffe, and the monkey (with drum).

That will keep him out of mischief and perhaps keep him from getting lazy; but I had not heard that this was the avowed plan and view of the authorities, and I suspected that they had some theory of education whereby this circus itself was considered to have educational value. If so, they would probably defend it, claiming it to be just as valuable for the mental, moral, and social development of these children as a class in arithmetic, or in grammar, or in spelling. On this supposition I tried to think out what their theory of education might be. In the following chapter will be found my attempt to solve this problem.

CHAPTER THREE

What Theory of Education Can Justify the Cleveland Special Class for the Gifted?

The late Professor Brooks of Johns Hopkins University attempted to formulate a definition of life. He did not find it an easy task, for the biologists are just as much puzzled to define life as the educationists are to define education. After much reflection, Professor Brooks finally settled upon the definition, "Life is education." In this interesting statement we have not only a definition of life but also a suggestion of a close relationship between these two very fundamental phenomena. The thought that life is education certainly distinguishes the living world from the non-living. We cannot educate a mineral or a rock or a volcano, but we can educate an insect, an animal, or a man. Even the lowest forms of life, such as the amœba or paramecium, can be educated to a very limited extent. The parallel between education and life is further emphasized by the fact that the higher we go in the scale of living things the more susceptible to education we find them.

The conduct of the special class, described in the previous chapter, could be justified by assuming that *education is life.* This statement of the meaning of education is in distinct contrast with the notion, under whose domination educators have labored for years, that education is *preparation* for life. This older definition of education has always been a very difficult one to put into practice because every one has his own idea as to what constitutes life and his own idea as to what is a suitable preparation for it.

In our educational practices we are like the sailor who was told to steer the ship by a certain star and was later found to be headed in an entirely different direction, and when asked, "Where is the star you were told to steer for?" replied, "Oh,

I passed that long ago." We have passed by many of our supposed goals of education and we have discarded many methods that we once thought the only satisfactory methods of preparation for life. At last we are beginning to act upon the idea that education *is* life. The child is not getting ready to live, he *is* living. Those methods have always succeeded best which have taken the child where he is, and have helped him to live happily and properly at the time. Those methods have been least successful which have attempted to project him into the future, trying to make him regulate his life of the present by his consciousness that real life is far ahead. "Do thus and so, and when you grow up you will be a splendid man," or "Study this, because some day you may need it."

We need to apply the law of consciousness to education. No action is perfect until it is so well learned that consciousness has dropped out. A well-learned habitual performance may be seriously marred by the injection of consciousness into it. One cannot even walk naturally if he begins to think how he is walking. Education as a preparation for life is necessarily a highly conscious process, consequently highly unsatisfactory. Education as life, on the other hand, puts the consciousness where it belongs and not where it interferes with the performance.

The reader familiar with recent educational movements will recognize at once that this is exactly what we have been doing in our most progressive schools. We have even gone to the extreme in some cases. Some have advocated that children should not know that they are getting an education. Such an extreme position is unnecessary, if not undesirable. There is a certain advantage in the child's knowing that he is getting an education, but there is a decided disadvantage in his being made to be conscious of it all the time. For instance, I have taken up rowing for exercise and I know that it is good

for my health, but the thing of primary importance to me is that I enjoy the rowing. If some one were continually saying to me — "You need not *enjoy* the rowing, in fact you had better *not* enjoy it; the main thing is that you are improving your health" — it is pretty clear from all that we know of such matters that not only would I cease to enjoy rowing but would cease to be improving my health. Let us apply this principle to one case of school work where it is most difficult to apply, and then we shall turn to its application in the classes for gifted children.

We still teach children to read; to write; to count. We also teach them manners. We often teach in such a way that we antagonize children rather than help them to live. A gifted child friend of mine who has never been in a class for gifted children, said to me recently in answer to my question, "Do you like your school?" "No, I hate school and I hate manners." He was the victim of wrong methods. He should have been allowed to *live* and should have been helped to live correctly.

Nobody likes preparation, getting ready. Why should a child have to *learn* to write? Why should he not write? Why do we continually make him conscious that he is learning? Why do we make him conscious that he is working? Why not rather let him be conscious of his goal? Most children at six write better than most men at sixty. But if you complain to the man of sixty about his writing, he will say to you, "I was trying to communicate an idea to you, not trying to please you by beautiful penmanship." I trust the reader understands that we are not suggesting the abandonment of the idea that children should become good writers, readers, and computers, but rather that we are urging that the emphasis be differently placed. We are carrying out our idea that children should *live*, and in the course of the living they will want to do things that involve reading and writing

and counting. Of course, the child must be shown how to do these things, but it makes all the difference in the world where the emphasis is placed.

Some years ago I was visiting at the home of one of my pupils. He asked me if I would like to walk down to the mill pond and see a wharf that he had built. When we reached the mill pond, I was amazed to see a stone and dirt pier extending into the mill pond several feet. A retaining wall had been built of good-sized stones and this filled in with dirt. The structure was probably six feet wide and four feet deep, and extended out into the mill pond perhaps eight feet — a considerable piece of work for a small boy. The following conversation ensued:

"Did you make this, Ernest?"

"Yes."

"Where did you get all these stones?"

"Up there," pointing to a stone fence on top of a steep hill one hundred yards away.

"And where did you get all this dirt?"

"Over there," pointing to a hole perhaps one hundred yards in the other direction.

"Wasn't it a lot of work?"

"Yes, but don't you think it's nice?"

There is the whole argument in a nutshell. To have been *compelled* to transport all that dirt and stone in a wheelbarrow, as he did, would have been drudgery of a severe kind, would have aroused all kinds of unpleasant thoughts and feelings, and would have accomplished nothing for the boy except a certain amount of development of his muscles. Certainly no amount of muscular development would have begun to compensate for the injury to his spirit and character. But Ernest had not been hauling dirt and stone; he had, from the start, been building a wharf which he wanted, which he thought would be "nice," and which he did enjoy when it was finished.

Contrary to the notion of many teachers and persons who call themselves educators, the evidence is accumulating that there is nothing in the getting of an education that cannot be accomplished in this way. Many readers will be inclined to urge two objections: first, that there is a good deal of drudgery that cannot be thus motivated, and second, that it is necessary to have such drudgery for the development of character.

Both of these objections miss the point. The first is not true. There is always a motive back of every action. The second objection results from the failure to hold in mind the difference between merely hauling stone and hauling stone to build a wharf — all the difference between working with a motive and without a motive. There seems to be no reason why the child should not be conscious of the motive. Every one likes to know the reason, or purpose, or objective of his work. It is as true of the mental defective as of the gifted. Dr. Barr, formerly Superintendent of the Institution for the Feeble-minded at Elwyn, Pennsylvania, used to have a pile of stones upon which he was accustomed to exercise his low-grade cases, by having them put the stones into wheelbarrows and move them from one locality to another. After the same group of boys had moved the stones two or three times, one of them remarked in his drawling, feeble-minded speech, that he did wish Dr. Barr would find out where he wanted those stones. Even this imbecile resented in his feeble-minded way the having to do work without a motive.

Another group of imbeciles had cleared the scrub oak and pine from a hundred acres of land. The growth had been cut and grubbed out, piled, and burned. I asked one of them if it wasn't hard work clearing the land. He seemed not to understand me. So I put it differently:

"What have you been doing?"

"Oh, we have had the greatest fun building bonfires."

Their feeble minds could never have held the thought of the wonderful crops they would raise after they had cleared the land. So the superintendent had not said, "Clear the land," but "Pile up this stuff for a bonfire." They were living — not getting ready to live two or three years hence.

The second objection — that children must be forced to do unpleasant tasks — is more deeply rooted in the minds of teachers than the first. It is also more pernicious, because it perverts an entire method and develops in the child an utterly wrong view of life. If only we could eradicate that idea from the minds of parents and educators, all our methods of teaching, training, and disciplining would at once change, and as fast as the children could grow up we should have a community with a wholly new attitude toward the social problems and many of the most serious difficulties of the present day would automatically disappear. Please note that we are not objecting to drudgery or pleading for a "soft pedagogy," as it is called. Drudgery, hard work, and disagreeable tasks are useful — even essential, if you will — in character building. What we insist upon and what most parents and teachers do not understand is that the individual must *make himself* do the disagreeable task: he must do it because it is a part of a larger plan of his own. He must feel the motive, appreciate the reason. Otherwise he is a slave.

Let us return to Ernest's wharf. Suppose that instead of Ernest having set himself that problem and worked it out, his father had said to him that he wanted a wharf and Ernest must build it. Ernest had no interest in it. He did not want to do it, he had other things that he *did* want to do, and in every possible way indicated his objection to doing the work. Assume further that the father, believing that it is good for a boy to do what he does not want to do, used threats of punishment, to compel Ernest to build the wharf. Will any one maintain that Ernest would have got more character

development under those conditions than the conditions under which he actually built the wharf? In the opinion of the writer the effect of the whole procedure would have been bad, and only bad. It has not one redeeming feature. Some may want to claim that the father would have at least developed obedience in his child. On the contrary, he would have tended to develop disobedience. The boy who has learned to be afraid of his father will always seek to avoid punishment, but he will seek to avoid it in any way that he can think of other than by doing the thing the father wants done.

If the father wanted that wharf built, or if he could see that it would be a bit of good education for the boy, what was he to do? There are many things that he might have done without making a slave of the boy. Slavery develops only muscles and habits, never thoughts and character. What was the father to do? The father had a problem that he wanted the boy to solve. He should have presented it in such a way that the boy would have treated it as his own problem. That being once accomplished, everything would have gone on precisely as it did. Ernest got all the moral training and character development out of that problem that there was in it. He made himself do a lot of disagreeable hard work. He used his mind in thinking and in planning to a degree that he never would have done if it had not been *his* program, and he made himself stick to it until he finished it.

But how was the father to get Ernest to assume the problem as his own? How is the teacher to get every pupil to assume all the problems that he must solve if he is going to get an education? In the language of today, he must "sell it to him." He must make the child feel that for one reason or another it is worth doing. Here is where the teacher's or the parent's resourcefulness counts. At this point some teachers will say: "We have not time to do all this. What is the use of wheedling and cajoling and teasing, when in a fraction

of the time we can give a command which, *because it has behind it the authority of the entire school system, must be obeyed?*"

O Education! What crimes are committed in thy name! Most readers recall the Johnstown flood. A man was hurrying from the onrush of water. He was pulling a horse by the bridle. Every farmer knows the effect of pulling a horse by the bridle. Another man, passing, called out, "Why don't you get on and ride?" "I haven't time," replied the man with the horse. That is it. We haven't time to do the only sensible, logical thing, the only thing that will bring the desired result. This is one of the places where the class for the gifted offers a ray of hope. We are not so crowded for time. We can do the right thing even if it takes time.

But to return to our question, How is the idea to be sold to the child? With a child of Ernest's age and interests, the idea would be sold by pointing out the advantages — the fun to be had, the power to be gained, the money value or the satisfaction that would result. It helps in living. Then there is the challenge. Many a child needs only a challenge. "Can you do that?" And then the reward, in the form of commendation, reputation among schoolmates, or a reasonable share in money value that accrues as a result of the labor. A father or a teacher who has a reputation for appreciating what is done seldom has difficulty. With a younger child the motives become simpler as the task must become easier.

It must not be forgotten that in all this the personality of the teacher or parent plays an immense rôle. We all know that there are some people who can sell us stock in a wildcat mine. There are others who could not sell us postage stamps at face value; we should prefer to walk a mile to the post office. It is the teacher with the personality who wins. It is the parent with the right personality who finds the rearing and training of children a delight and a success. For the individual

Special high I.Q. class of fourth-, fifth-, and sixth-grade children.

with the pleasing personality it is not difficult to lead the child where one wills — indeed, sometimes it is so easy that it is dangerous. The child performs the task for no other reason than because the teacher asks it. This is dangerous from the standpoint of education because it tempts the teacher to be injudicious in her demands and it does not develop thought or judgment on the part of the child. With a very young child, to be sure, it is often the only method. Mother says, "Johnny, you do so and so." Johnny says, "Why must I do that?" Then Mother says, "Because Mother wants it done." This is sometimes justifiable, but most parents and teachers should watch themselves lest they carry it too far. This is asking the child to do something out of love or respect for some one else; to solve your problem, not his own.

Sometimes Mother's answer takes a different form. Instead of saying, "Because Mother wants it done," she says, more or less sharply, "Because I say so." One is inclined to say that such an answer is never justifiable; but experience teaches us that universals are dangerous expressions. Such an answer *ought* never to be necessary and not being necessary is undesirable. I know that many will object to this and will cite in opposition the principle of unquestioning obedience. Obedience is good, and the idea of unquestioning obedience is dear to the hearts of many parents and teachers. For slaves it is good; for free men and the children of free men unquestioning obedience is pernicious. There should be no such thing as unquestioning obedience. There may be much that looks like it, but there should always be a reason for the obedience and the child should always act upon reason, which means that he has questioned it and decided. The reason may be very simple — no more than, "I do not know anything about this and Father does (or teacher does); therefore I will do as he says."

We talk a great deal about training to think, but probably

very few of us know what we mean by it. I am very doubtful about the possibility of training a child to think, if by training we mean showing him how and giving him problems to work out. What we can do is to give him an *opportunity to think*, by putting him in a situation where he can reach his goal only by thinking; but whether even then we make him think may be questioned and will depend upon our definition. But certainly when we make a child do anything by the force of our authority, or even for the sake of pleasing us, we are depriving him of the opportunity to think. Hence the insistence that, as far as possible, every activity of the child, in school or out, should be aroused in such a way that it becomes the child's problem and is motivated by his own reasoning. With gifted children there is seldom any difficulty along this line. There is, however, another problem which we shall next consider, which has sometimes led to dissatisfaction with the gifted child.

A statement which has come to be rather generally, though uncritically, accepted is that gifted children are flighty, they cannot stick to anything that requires hard work. They lack persistence. The criticism is unjust and untrue. When sincere, it comes from a failure to understand the psychology of the gifted child. We say when sincere, because unfortunately it is not always sincere. It is often expressive of jealousy. The criticism is frequently used by those who do not approve of the methods used in classes for the gifted children. There are still many teachers who cannot see, or will not see, that the building of Ernest's wharf was of greater educational value and better as discipline because he was happy in the making of it, than it would have been if he had done it as a piece of drudgery which his father compelled him to do. Holding as they do to this view, these teachers love to say: "Aha, you see what your soft pedagogy does to these children. They have no stamina, no persistence. They will

not complete the tasks assigned them." It is true that gifted children often will not complete the tasks that these teachers set for them; but the reason is already obvious to the reader who has followed our previous discussion. It is because such teachers have not "sold the idea" to the children. They have not taken the trouble to help the child to accept it as *his* problem. They have demanded that he solve the teacher's problem. That he will not do, at least not all of the time. The alert minds of these bright children furnish them with too many problems of their own for them to be willing to devote very much time to other people's problems.

Let any one who thinks that gifted children have no perseverance watch one of them working on a problem of his own. They can put themselves through as much drudgery and hard work as any one could wish. There are exceptions, of course, for a group of gifted children are as variable as a group of normal children — perhaps more so; but as a group the charge that they are not persistent or will not work is a gross error, not to say a slander.

It seemed clear as we thought over our first day in the Special Class for Gifted Children, that the theory of the Cleveland educators must be that education is life. Those children were certainly living. They were not just going to school. They were healthy, happy, and alive. They were doing things and not merely learning about things. Moreover, there was no wasted effort. They were making their own selections and necessarily were choosing things that they could understand. We were satisfied that, though different, it was still education and probably highly effective education.

It seemed that the gifted child had at last attained recognition.

CHAPTER FOUR

Objections to Special Classes for Gifted Children

It has been truthfully said that no progressive step is ever taken without objections being quickly voiced by some one. Special classes for the gifted are no exception.

It might also be said that objections are always of two kinds: the true and the false; the sincere and the hypocritical; those due to honest doubt and those due to laziness or a disinclination to change one's habits.

One is suspicious that many times the objections to special classes come under the last head. However, there are honest doubters. It is, therefore, worth while to relieve the minds of those who fear that special classes for gifted children may be fraught with danger. Many have heard objections which seem to them serious, and they can imagine many possibilities where harm could result from such a procedure.

Most of the objections that have been offered are sincere and born of honest doubt. The small percentage that are not sincere are, of course, not worth considering. It is sometimes amusing to hear some persons say that special classes for defective children are all right, while special classes for bright children are in an entirely different category. The fact is, the same persons objected to special classes for dull children when they were first started, and many of the arguments originally used against special classes for dull children are now being used against special classes for gifted children.

Perhaps the objection that most naturally arises in every one's mind is the fear that by picking these children out and putting them into a special class of gifted ones, we shall make them "conceited little prigs." We so dislike conceited persons that we object to anything that might tend to produce one where he did not exist before. The briefest and most con-

clusive answer to this objection is that *it doesn't happen.* Out of some five hundred children who have been in the Cleveland special classes from one to four years, we have yet to hear of one who has been made conceited. That ought to be sufficient answer; yet some one will undoubtedly say, "But there always has to be a first time." Therefore, let us discuss the matter a little further. In reality, the objection is born of a misconception. As a rule the narrowly conceited person who is snobbish and intolerant is not the person of ability. The snobbish, intolerant person is one who lacks ability and does not know how little he knows, or the person who in his heart is conscious of weakness and affects a superior manner and boasts of his ability as a compensation. He has what is called nowadays an "inferiority complex." Again, it is often said that it is better that a person should think well of himself than be too modest. Many would probably agree that we prefer a child who has a little pride in his ability to one who is diffident. Be that as it may, the fact remains as stated that these children are not little prigs, but, on the contrary, are the most agreeable, delightful, and normal of any children that we know. If the objector is still unconvinced, one might ask: Is a child more likely to become conceited in a class of twenty as bright as he is, or in a regular class where he is by far the brightest in the group?

Another objection has been urged, that in the regular grade the bright children are the leaders of their respective groups, and by putting them into a special class we take the leaders out of, say, twenty different classes and put them all together where there can be only one leader. Instead of twenty leaders we have only one. This objection contemplates a leader as a leader of men. There are few leaders of men, and probably they are determined by other things than school education; but there are other kinds of leaders. In the special class for gifted children, each may be a leader in his own line.

Moreover, experience shows us that the bright child is not necessarily the leader in the regular grade. On the contrary, he is often the quiet, unobtrusive child who follows rather than leads in all the social activities. Not infrequently he is the butt of the jokes and petty annoyances of the others, who are jealous of his success with his lessons. Because he is so satisfactory as a student, he is classed as "teacher's pet." And teacher's pet is not usually accepted as leader.

A curious objection, born of further misconception, is that the special class is undemocratic. The effort to give these children enough to do is interpreted as an attempt to give them special privileges. The newness of the idea calls special attention to these classes and lends color to the notion that they are somehow a form of caste. As they become common, they will cease to attract attention. Then this difficulty and several others that often have to be considered will disappear. Persons who do not understand the plan and the routine of the modern school frequently evolve strange theories.

One writer put it this way: These children should associate with all types of children. They cannot select their associates when they grow up, and therefore they should not be allowed to while they are in school. This is a misconception of democracy as well as of the modern school. The second statement is a curious perversion of fact. Choosing our associates is exactly what we do in life. We choose the part of the city we wish to live in. We choose the neighbors with whom we wish to associate. We associate with those of approximately our own intelligence and ability. We do not go and live in slums for the sake of being democratic. Democracy means literally, "the people ruling." If democracy stands for one thing more than another, it is equality of opportunity. This is exactly what the gifted child never has in school until he gets into the class for gifted children. In the regular class he never has an opportunity to show what he could do. Instead

of the special class for gifted children being undemocratic, it is the only truly democratic procedure — the only plan that gives the bright child a chance.

There is another highly important consideration from the standpoint of democracy. Democracy stands for coöperation, with each individual doing his best and contributing to the general welfare whatever service he can do best. Now, if there is in the community a group of children capable of being educated for the highest service, there is a positive loss to the community if they are not so educated. Communities that do not develop their natural resources are considered backward, slow, indolent, and unprogressive. Gifted children are literally the greatest of natural resources. This does not say that the special class is the best way to develop these resources. That is another question. It does say that the special class is in no way undemocratic and if it shall prove to be a good method, it will be the duty of democracy to use it.

School men who have not studied the problem deeply sometimes object to special classes on the ground that it is desirable to have the gifted child in the regular group. They assert that he serves as a stimulus, a pacemaker to the other children. This is similar to the old idea relative to defectives; namely, that in the regular grades they learn from the brighter children. In neither case did the argument take account of the facts. The dull child did not learn from the bright children. He was discouraged by them. Similarly, the average normal child is not stimulated by the gifted child in the same room. He is discouraged by him. The teacher knows that whenever there is a contest many children in the room refuse to compete. When asked why, the answer almost invariably is, "Oh, what's the use? Billy gets all the prizes." Experience has proved that when the exceptionally bright child is taken out of the room those that are left are happier and get along better.

A young teacher of a regular grade, from whose class two bright boys had been taken, was asked if she noticed any difference in her class. She replied promptly, "Yes, very decidedly." She noticed that she had to explain things more carefully than she ever did before. She apparently did not recognize the significance of what she was saying, but it is a perfect illustration of what happens. She had been explaining things to the two boys, while the rest of the children, not quite so bright, had not been able to follow her. Now that the two were gone, she found it necessary to get down to the level of the majority.

Theodore Henry reports several similar statements by teachers and says, "Obviously this indicates that under ordinary circumstances teachers are misled by the performance of bright pupils and give less drill than ordinary children need; or, if they spend time for the drill which is needed for ordinary and dull children, they waste the bright pupils' time." [1]

One other objection to the special class for gifted children is urged. This one is born of a complete misunderstanding of the present purpose and method of such a class. This objection is often couched in the form, "I do not believe in rushing children rapidly through the grades." We have already stated that from 1900 to 1920 this was the idea of the special class. Since 1920 the idea of enrichment has come to the front. This is the Cleveland plan.

It should be stated that almost none of the objections mentioned in these pages have appeared in print. Out of several hundred articles in the journals dealing with the problem of the gifted child, only one writer argues against the special class. He sums up his objections in these words: "Bright pupils should not be segregated because, first, they acquire vanity and false pride; second, their absence reduces

[1] "Classroom Problems in Education of Gifted Children," in *19th Year Book, National Society for the Study of Education.*

the enthusiasm of the class; and third, they should spend more time getting work better." Comment unnecessary!

The movement for special classes for gifted children meets with difficulties from an administrative standpoint, but from the educational and psychological standpoint the strength of arguments are all on the one side, as we shall try to show in the next chapter.

CHAPTER FIVE

Advantages of Special Classes for Gifted Children

In our opening paragraph we indicated that sixty years ago the attention of one of the great educators of America was drawn to the injustice of keeping all children a whole year in a grade. From that time the "lock step" began to be broken. Progress was slow, but the principle was recognized. Bright children were promoted in the middle of the year and again at the end of the year. But this was never entirely satisfactory. Such a rough-and-ready plan inevitably left children somewhat handicapped by the omission of some explanations, principles, rules, or facts that were more or less essential for the understanding of future work. Besides, it was early felt by many educators that a child who did eight grades in four, five, or six years came up to the later grades and high school at too tender an age to profit fully by the teaching in those grades. Moreover, he was thereby forced into the society of children so much older than he, that he was always more or less out of place and often unhappy. It was thought by some to be morally wrong to force pre-adolescents into the companionship of adolescents. Nevertheless, it was felt to be the lesser of two evils.

The next move, that of establishing *rapid-advancement classes*, obviated the former of these objections but not the latter. Their training was now continuous, with no jumps and omissions; but they were still too young for the social burdens that were forced upon them. On account of this, many superintendents refused to organize these classes.

However, the problem of the gifted child, once recognized, refused to be downed. More and more it was seen that the inadequate treatment of the bright child was responsible for school difficulties never before understood. The special

class for these children, with an *enriched course of study*, was the inevitable next step.

The desirability of giving every child an opportunity to do his best, an opportunity which he cannot have in the regular grade, was increasingly insisted upon. The bright child loses interest when compelled to wait for the slow or even the average child. In this respect children are no different from adults. Where is the adult who can tolerate a long and tedious explanation of something that he understands almost immediately? The work of the grade which is necessary for the majority of the children is a bore to the gifted child. As a matter of actual experience, the gifted child does the work of the grade in approximately half the time that is required by the majority of the children in the room. How is he to occupy the other half of his time? In the disposition of excess time there develop two types of troublesome cases. One type is content to be idle, thereby cultivating habits of laziness. Another group, perhaps of the nervous temperament, cannot keep quiet and so gets into mischief, again developing bad habits.

As an illustration of the first type, the first class established in the Cleveland schools was three months finding itself. During that time the teacher repeatedly contemplated resigning, her reason being that the children were so lazy that she could do nothing with them. They had learned to be lazy from having spent four or five years in the regular grades, where, for half their time, they had nothing to do. At the end of three months these children discovered that they were now in a different kind of atmosphere, and from that time on all was changed. They made enormous progress.

It is little short of being a crime to waste the energies of these bright children by making them mark time while the slower majority do the work assigned. Not only are their capabilities not being developed, but bad habits are being

A high I.Q. class in junior high school: 7B grade.

formed. Not only are habits of laziness and mischief being formed, but the whole tendency is away from the one thing so much needed in democracy; namely, coöperation. There are two or three gifted children in every regular grade. They group themselves together and segregate themselves from the rest of the class. Instead of coöperating with the rest of their classmates, they naturally find themselves apart from the rest because they are different. When these bright ones are put into one group as a special class, the coöperation is perfect. The work of the teacher is made easier, and those who are left also benefit by the separation. It is even more desirable to segregate the gifted than the defectives. We have learned to segregate the defectives because they cannot do the work that is given to the regular children in the grades. We should segregate the bright children because they can do more and better work than the regular children.

There is a more fundamental reason why these children should be put in classes by themselves. They are different from other children. We may not know in what brightness consists, or of what genius is composed, but no one can observe these children by themselves under conditions where they have an opportunity to develop, without becoming thoroughly convinced that they are made of finer stuff than the majority. To begin with, they are healthy. According to the report of the physical director of the Cleveland schools, these groups of children are physically the best in the system. Mentally they are more alert, they think quicker, they are more observing, they can see relationships more promptly. They have more good habits and fewer detrimental ones. They have a better use of language. They seem to have more appreciation of social responsibility. They have more curiosity and more energy. They see the end from the beginning more promptly. In short, they "live" better, using that term with its fullest significance.

All this seems to indicate that they have a better-organized brain and nervous system. Perhaps a larger proportion of the 10,000 million nerve cells with which we all start life has developed. Perhaps there is a finer adjustment at the point where one nerve cell comes in contact with another — the so-called synapse. This superiority is probably not confined to the nervous system, but extends to the other tissues of the body. All of this means that they require better care.

The relative importance of heredity and environment in the development of the child is a question upon which there are as many opinions as there are thinkers. A more serious consideration is the fact that it is usually regarded as an academic question having little significance for education. In practice we have proceeded as though heredity were a fixed force alike in all of us, and environment the only thing that concerns us; and further, that environment is more powerful than heredity in some directions and entirely helpless in others.

While there is still much to be learned, science is far ahead of practice in this regard. We have had and still have a struggle between those who claim to believe in heredity and those who believe that everything is due to environment. At the present time the indications are that both sides of the controversy will have to reorganize their thinking. Even though we have admitted that both play a part in the development of the organism, we have probably been greatly in error as to what part each plays. There are certain fundamental principles which we have to accept, such as that (1) certain things in the offspring come by heredity and by heredity alone, (2) all such hereditary traits are influenced and more or less modified by environment, (3) environment cannot produce anything the elements of which were not furnished by heredity, and (4) environment may nullify the value of any, if not all, of the inherited traits.

We now recognize that our great mistake in education is that of assuming too great a uniformity of inherited traits. We are all alike in that we are all human beings; but under that one head there are such wide variations that to attempt to treat all alike is to make more blunders than successes.

To take intelligence alone, we now know that there are idiots, imbeciles, morons, dull normals, average normals, bright normals, and geniuses. We have also learned that the kind of educational treatment that fits the average normal child does not fit the moron; neither does it fit the bright child. The analogy between children and plants is centuries old, but we have always been afraid to carry it too far because our ignorance both of adult and of child nature did not permit us to know how far we might safely carry it. We have developed a proverb that "as the twig is bent the tree is inclined," meaning that habits developed in childhood affect the conduct of the adult; but we have now gone beyond that conception. We now know that single experiences in the life of the child sometimes affect the usefulness of the adult for good or for ill.

On an island in the Pacific Ocean grows a very beautiful tree, botanically named the Araucaria; one species is commonly called the Norfolk Island Pine. It has been introduced into semi-tropical America. Each node of the tree trunk sends out seven symmetrical branches. It is this wonderful symmetry that makes the tree so attractive. If, however, one of the branches is injured, the symmetry and beauty of the tree are ruined forever. If the terminal bud whose growth and development produce the trunk of the tree is destroyed, one of the seven lateral buds takes its place, growing straight up, thus insuring the growth of the tree trunk. Thus there are left only six branches instead of the symmetrical seven.

Like this beautiful tree, the child ought to grow symmetrically. Because of our ignorance, many good tendencies are nipped in the bud and the child must go through life more or

less deformed — mentally, morally, or temperamentally. The bright child in the regular grade is inevitably doomed to this loss of symmetry, because he is not kept occupied.

Every movement in education that has for its purpose greater attention to the individual child is a long step in the direction of preserving his inherent beauty and efficiency. Morons who cannot profit largely by the school training in reading, writing, and arithmetic were found to be greatly injured by that type of training and when finally turned out of school were not only inefficient but had unpleasant dispositions which easily led them to become enemies of society, to fall into a life of crime or indolence and laziness. On the other hand, wherever we have tried the experiment of devoting special attention to the feeble-minded and have given them the training that is fitted to their defective nature, they have become useful members of society, happy and contented and efficient to the extent of their capabilities.

The same thing, *mutatis mutandis*, is true of the bright child. It is true that a good many bright children have survived in spite of our neglect of them and have become great and useful men and women. Nevertheless, there is no answer to the old argument that we do not know how much better and more efficient they might have been if they had had better treatment. Moreover, it is practically certain that many a bright child has had his life ruined and has been lost to society because he was neglected. Probably every reader of this book knows of at least one person of whom it can be truthfully said, "If his ability had been recognized as a child, and if he had been rightly treated, he too might have been great." In all these cases the heredity is there, but the favorable environment has not been provided. Go to the horticulturist and you will find some plants in a special room, apparently receiving special treatment. If you ask the reason, you will be told that these are rare plants that cannot

stand the kind of environment that our common plants thrive in. Go to the zoölogical garden. You will find that some species are very elaborately cared for, because they are rare birds and cannot endure the ordinary environment. When it comes to the human offspring, there are those who argue that what is good for the majority is good for all. As a matter of fact, talented children are rare individuals and their special talents should be conserved and developed to the fullest extent.

After all, the principle involved is not new. We have only changed the basis of grouping. Heretofore we have grouped children for school purposes on the basis of chronological age. It is now proposed to group them on the basis of mental age. We picked out the defectives because they were most troublesome. Some schools are now picking out the gifted because they are most useful. Soon we shall recognize the individual abilities of all pupils in the organization of our schools. Indeed, it is already being done in Winnetka, Illinois, and in some other places.

When once we become accustomed to the idea and have worked out the administrative readjustments, we shall find that there are no objections to putting all the bright children together. Moreover, it seems inevitable that we shall find so many advantages not only to the child but to the administration of the school system that we shall consider that the change marks an epoch in the history of education.

CHAPTER SIX

What Makes a Child Exceptionally Bright?

What kind of child gets into these special classes? The teacher's answer to this question would be, "Those with a high I.Q." I.Q. means "Intelligence Quotient." It is obtained by dividing a person's mental age by his chronological age and then multiplying the figure thus obtained by 100, to avoid the necessity of expressing the I.Q. in fractions. Mental age is determined by means of mental tests. Chronological age means, of course, age in months and years. If the tests show that an 8-year-old boy has a mental age of 12, his I.Q. would be 12 divided by 8, which would be 1.50×100, or 150 I.Q. If his mental age is 8 and he is 8 years old, his I.Q. is 100; mental age 6, I.Q. 75; and so on.

Classes of gifted pupils are sometimes called "high I.Q. classes," meaning classes for children having an I.Q. somewhere above 100. There is as yet no accepted principle for determining how much above 100 a child must be in order to be eligible for these classes. Terman regards an I.Q. of 110 to 120 as "superior," from 120 to 140 "very superior," and above 140, "near genius or genius." The use of the term "genius" in this connection is perhaps unfortunate, since it somewhat prejudices the matter from the start. The term has a pretty definite connotation in the minds of most people, although widely variable in different individuals. It is generally agreed that we do not know in what genius consists, but for most people it certainly implies vastly more than having a high intelligence level or an I.Q. of above 140. Other terms that are applied to these children are "capable," "very bright," "supernormal," "bright," "superior," "talented," and "gifted." There are objections to be urged to all these terms. Some are too indefinite, and others, like "genius,"

imply more than is desired. On the whole, the writer is inclined to suggest that "High I.Q." is perhaps the best and safest designation for these classes. It is the term generally used by teachers and was originated by them. Presumably they find no objection to it. The reader who sees it or hears it for the first time may feel that it is awkward. Usage removes that objection. To some it will seem to have the same objection that we have for "gifted," or "talented," etc. — that of calling attention to great ability. As a matter of fact, it is meaningless to most people except as applied to these classes. Few people understand "Intelligence Quotient," still less "I.Q." If "high" is a dangerous suggestion, we could follow commercial custom and spell it "Hi." "Hi I.Q." is surely free from all suggestion of a disturbing compliment. It need have no more significance to children or parents than would "classes for tall children." [1]

Let us take the term "gifted," which is probably more often applied to these classes than any other except "High I.Q." The problem involved here is the fundamental one of whether these so-called superior or high I.Q. children have inherited special talents and abilities, as is implied by the term "genius" or "gifted," or whether, on the other hand, they are merely possessed of a better brain and nervous system. If it is the former, we have an educational problem that has never been solved, for no one pretends to know how a genius should be educated. It is a fairly general impression that genius should be given the widest margin of freedom, and that to hamper genius in any way by rules, regulations, or courses of study is to run the danger of destroying it. On the other hand, if gifted children are merely possessed of a better brain, the method of educating them may be somewhat

[1] In school practice the habit of designating the class simply as "Miss ——'s class" obviates jealousies of other teachers and other children — if these are liable to be troublesome.

simpler, but the responsibility for deciding for what they shall be educated becomes enormous.

To many readers the second of the above alternatives — that genius is merely a better brain and *not* special abilities — may sound ridiculous. For it has not occurred to most people to question the long-accepted theory that geniuses are born and that the inheritance of special talents is a common occurrence. Nevertheless, both of these theories are today seriously questioned by certain psychologists. We cannot go deeply into the psychological reasons for questioning these traditions, but we shall mention some facts that may prove helpful to the reader interested in this problem.

The new theory suggests that these special talents or abilities are not inherited but acquired — that the only thing inherited is an excellent brain, whose activity means a good mind. From this it follows that the person with a special gift or talent would have been equally talented in some other line had he happened to have been turned in that direction — provided, of course, that the other line were not one calling for more intelligence than that possessed by the individual.

In contemplating this theory, we at once think of poets and painters, mechanics, linguists, and many other people who are talented in one line and perhaps notably inferior along every other line and whose ability we have always explained on the ground of inherited traits. Moreover, we can frequently point to a father or mother or grandparent, who has had similar ability to that of the person of special talent. In rare instances we can even point to three or four generations, along the same line. This looks like heredity, but is it? In the old days of the guilds, children were brought up to do the same things that their fathers did, and any one not knowing the history of the guild system might readily conclude that the butcher, the baker, and the candlestick maker all inherited special abilities fitting them for their occupations. Of course

the situation is somewhat different in the fields of art, literature, music, science, and scholarly pursuits. Children are not brought up to be poets or musicians, and if they are specially trained in mathematics, or history, or music, it is generally because they show an inclination in that direction. But the more logically and critically we examine the evidence for inheritance of special talents, the thinner our arguments become.

To begin with, in a great many cases there is no semblance of heredity. Frequently there is no ancestor as far back as one can go that shows any similar ability. If we look forward, it is notorious that the possessors of these special talents do not usually transmit them to their children. As commonly expressed, "great fathers do not have great sons." Indeed, through all these years during which we have held rigidly to the tradition that poets are born and not made, we have been puzzled to answer the question, "Why is it that poets do not have poetic sons? Or artists, artistic children? Or musicians, musical children?" Biographers have generally been able to find that all great artists have come from families where there was some member, at least, who appreciated that particular art. But in what art or special gift can we point to a great father and a great son? There are a few, of course, and these instances may argue as much for training as for heredity, but we must admit they are extremely few. Failure to inherit talent has often been explained by saying that only one parent possessed the talent and the child inherited his qualities from the other parent. In the case of Robert and Elizabeth Barrett Browning, both of whom were poets of high order, even this argument breaks down. Their son is said to have shown no trace of poetic inclination. Moreover, in the cases where the child does seem to have ability similar to that of the father, it is a rare thing to find that it is *precisely* the same.

Many readers will still ask: If this is true, how do we account for the fact that we often find three or four or more generations of doctors or of lawyers? Does not this show that there has been an inherited interest in these special lines of activity? Here, the answer is not difficult. It is not heredity as at first appears, but environment. We must not forget that it happens as often that the physician's son is *not* a physician and the lawyer's son is *not* a lawyer. If it were a matter of heredity, this could hardly occur.

In such cases the theory we are discussing explains perfectly what happens. Let us take an illustration: John Doe and Richard Roe are surgeons. Doe's son is also a surgeon. But Roe's son is a lawyer. How do such things happen? Doe and his boy spent much of their time together. They were chums. The father was enthusiastic about his profession, and the boy, who followed his father in everything, followed him into this also. Dr. Roe was an equally good surgeon, but had had an entirely different bringing up and consequently brought up his own boy very differently. Roe was quiet and taciturn, never talked much with his children, never talked about his work. When he had finished at the office or the hospital and came home, no reference was ever made to surgery. The boy never heard surgery discussed and therefore developed no interest in it. He, however, had a schoolmate of whom he was very fond, whose father was a lawyer. Through this association he became interested in law and himself became a lawyer. In times and places where it is a tradition that the child shall follow the father's trade, the tradition determines it. But where that does not prevail, the occupation or profession of the son is often determined by what seems to be accidental conditions.

The theory, then, is that what is inherited is a brain of specific quality (poor, average, good, excellent), with corresponding mental capacity. Specific abilities are the result of

that good mind being turned toward certain specific fields in which interests have developed, whether intentionally or accidentally. These interests may be acquired so early in life that no one, not even the parent, is aware of them. In such cases it is perfectly natural for one to say, "Well, if my child did not inherit this trait, I do not know where he got it." It is true that we do not know where he got it. He surely did not inherit it. Sometimes, even though the parent does not recognize its source, the early origin of the interest can be very definitely and surely traced. On the other hand, the interest frequently comes relatively late in life. Some persons, who have manifested great abilities along certain lines, have not known until they were fully grown or perhaps quite mature just what it was to which they wished to turn their attention.

As already stated, the cases of artistic ability are the most difficult to reconcile to this view. It is a world-old tradition that poets are born and not made, and the same is true of painters. And yet, today, with our modern methods of teaching, we are beginning to make poets and painters. Those unfamiliar with the work of our best schools will find it hard to believe this statement. But it is true. The ability of children to express themselves in poetry or prose, in painting or the plastic art, is being demonstrated daily in our high schools wherever such children are given an opportunity to express themselves.

We can put the whole matter into a brief illustration. Given one hundred children of any parentage whatsoever, provided only they have the same high degree of intelligence; select one hundred professions, arts, trades, or skills of such kind that they require for their practice the same degree of intelligence as that possessed by the one hundred children; and it would be possible to train and educate any child in the list, for any profession, art, trade, or skill in the list.

That is an extreme statement of what the theory means. It is hard to accept. On the other hand, it cannot be disproved by any evidence at hand. This does not mean that such a result could be obtained by any of the methods usually employed in training children. It means that a very special environment would need to be provided for each child from the minute of birth. The two most important factors in such an environment would probably be material surroundings that would suggest and favor the adoption of the occupation desired, and, *more* important, a parent, teacher, or adviser for the child, who was skilled in and enthusiastic about the proposed occupation and, most important of all, a person who was highly admired by the child.

Whether such a theory is true or not, no one knows. The doctrine of special gifts or talents is dear to the hearts of many people, and even if the view which we have briefly presented proves to be true, it will be a long time before it is accepted. But the mere fact that the old tradition is now questioned compels us to fall back upon a sure foundation if we can find one. In reducing all to an inherited brain and the environment, we are on a sure foundation. There is no question about the biological heredity in the case of physical traits. Blue eyes or red hair are not acquired. They are inherited according to very definite laws. It is equally clear that there are various types of nervous systems that are inherited and in consequence there are types of mind. While we do not know so much about the specific laws governing intelligence, it is a matter of common observation as well as of scientific demonstration that high intelligence "runs in families." In some families we find low intelligence, in others a medium grade which we call average intelligence. It is also clear that the type of intelligence that we call *high* intelligence has greater capacity for achievement along more lines than the type of intelligence that we call average. An analogy from physical

strength may be helpful. There are people of small stature, small bones, and small musculature; there are also people of large stature, large bones, large musculature, and great strength; and then there is a group of the average between these two extremes. It goes without saying that the man with the large stature, with the big, strong bones and heavy musculature and great strength, other things being equal, is the more efficient man in lifting heavy weights, moving large bodies, or resisting the influence of gravitation. We say, other things being equal, because we do not wish to complicate the illustration by thinking of such conditions as a man of small stature using his brain to devise mechanical means for moving large objects. We are speaking only of the physical ability in the case. Similarly, a man of high degree of intelligence is, as we have said, highly capable of great achievement, and if the foregoing theory is true it matters not to what he turns his attention. If the theory is *not* true, then he is limited by some kind of an inherited influence by which he is compelled to move in one direction only.

One further question may be discussed by way of helping to clarify the situation. That is the question: "In what does high intelligence consist? How does the child of high intelligence differ from the one of average or low intelligence?"

Beyond doubt it is primarily, though not solely, a matter of brain — not, as was at one time thought, a matter of quantity or weight of brain, but rather a question of quality. It may be a question of the chemical composition of the brain cells, whereby the cells of one brain transmit more energy or transmit it more easily than those of another. It may be a question of the way in which the nerve energy travels from one cell to another, by what is known as the synapse. It may also be a question of the proportion of the total number of brain cells that have fully developed. There are supposed to be somewhere near ten billion brain cells possessed by a

human being; but it is not thought that they ever all fully develop, or that there is the same proportion of fully developed ones in all individuals. But though we mention brain first, we no longer think of brain as the sole condition for a good mind. Good blood is also a vital necessity, and it is quite certain that high intelligence is conditioned upon a blood that has an inherited or acquired optimum composition. We can, perhaps, understand this from a reference to our own mental condition at different times. Compare our quality of thought when we are fresh and rested with the same quality when we are exhausted and fatigued. There may be as wide a range, under these conditions, as from genius to stupidity. It is customary to explain this exhausted or fatigued condition as due to the presence in the blood of uneliminated waste products. Consider also the types of insanity where the condition is due to contaminated blood. In the normal healthy man such a condition is temporary and the blood is completely purified when rest and good conditions occur. The stupid man may be the man in whom conditions, at least analogous to this fatigued condition, are chronic or habitual.

Another point should not be omitted, in regard to the educational practice of the early years. That is the possibility that much depends upon the way in which the brain is first used. We speak of neurograms or brain pathways developed between the nerve cells as the result of the experiences the child has. It is conceivable that unfortunate early experiences may create brain paths that forever handicap the individual, whereas other more fortunate experiences may be forever helpful and beneficial to him. Illustration: There are cities in which travel and traffic are very difficult because the streets were established at random, as each individual happened to want a street running past his residence or place of business. There are other cities where the streets have

been carefully figured out with a view to convenience, and the result is that it is very simple and easy to get quickly from one part of the city to another. It is not inconceivable that a parent with sufficient intelligence, by beginning at the moment of birth, might plan a series of experiences for the child that would result in the formation of brain paths that would be of maximum efficiency. At present, whatever efficiency results from these early formed brain paths is largely accidental. We should like to believe that our school training is largely in the direction of forming these optimum pathways; yet even schoolmen would be loath to make any very strong claims. It is because of the belief that special classes for gifted children *are* a step in the direction of developing better brain paths, that attention has been given to this problem.

It should not go unemphasized that many of the difficulties met with in school in the training of children are due to the unfortunate mistakes made in the very early life of the child. We have already noted that the first class for the gifted children in Cleveland was handicapped by the fact that the pupils had spent four or five years in the regular grades, where they had learned to be lazy. Every child who enters school learns many habits — mental, moral, and social — that are unfortunate.

We now have our educational problem pretty well before us. The gifted child is at least a child of high intelligence. Anything more than that we do not know, and with anything more we are at present not vitally concerned.

Our first problem is the discovery of the children with high intelligence. Fortunately, this is easily done and intelligence may be determined to any desired degree of accuracy, depending only upon the amount of time that we wish to devote to it. As previously stated, there is no consensus of opinion as to what I.Q. level should be the limit for admission to the special

class for gifted children. In Cleveland it appears that the limit of I.Q. 120 was planned, but for reasons to be explained later it was found necessary in a very few cases to admit children with an I.Q. lower than 120. In some instances this has proved too low. In other cases, however, these children seem not to have been out of place. We shall discuss this in another chapter.

CHAPTER SEVEN

The Teacher

There is a story of a man who wanted to tease an old farmer and so told him that a chemist had discovered a universal solvent, a fluid that would dissolve absolutely everything that was put into it. It was thought that such a statement would make the old farmer open his eyes wide in amazement, but instead he closed them a little more than usual and said, with a quiet drawl, "What be they going to keep it in?" When one thinks of special classes for exceptionally bright children, the first question he asks is, "Who is going to teach them?" The thought underlying the question apparently is that it would require not only a teacher who possessed supernormal intelligence, but one with as many special talents as there are children in the class. This is a misconception quite consistent with the older notion of the character of education. The old idea that education is the process of imparting knowledge is still strong and often persists even among our best thinkers.

Certainly, the teacher should have a keen and alert mind and know where information can be found, but it is false and dangerous doctrine that the teacher should know more than each of the pupils on all subjects. We say that it is dangerous doctrine, because unfortunately many teachers work under the notion that, not having the knowledge, they must at least pretend to have it; and so when a child asks a question which they cannot answer, they resort to deception or even to the giving of misinformation rather than admit that they do not know. From every standpoint this is a serious matter. In the first place it gives the teacher what Professor James used to call a "bad conscience," and certainly it deprives the child of an essential to real education — an opportunity to discover something for himself. Occasionally a teacher of

bright children has complained that it was hard work to keep up, saying that she felt ashamed to say too often that she didn't know. We have always reassured such teachers, reminding them that if one is a master in one field, he need never be ashamed of being ignorant on any particular topic outside his field. Many a regular teacher has seemed to get along pretty well on not much more than good nature and good intentions. Moreover, it is a comfort to the children to find something that even the teacher does not know. It gives them encouragement to keep on — shows them that the teacher too has to study. But, best of all, it compels the teacher to say to the child, "That is a good thing for you to look up for yourself." Thus the child has an opportunity to do real work, to make a discovery, and to feel the joy of being a discoverer and perhaps a creator.

However, it is true that the teacher is an important element in the work with gifted children. Fortunately, good teachers are not impossible to find. Enough have been found for all the Cleveland special classes. What is the basis of selection of these teachers? What are the requirements? From observation and acquaintance with them, I should conclude that the teachers of gifted classes in Cleveland were selected for the following reasons:

First, for their experience with normal children. This experience should be sufficient to enable the teacher to feel at home in the educational system, to feel reasonably permanent, and to have a good degree of confidence, but *not* sufficient to make her hidebound and stereotyped.

Second, I should say they were chosen for their open-mindedness, their willingness to study the problem and to learn, to receive new ideas, to try new methods.

Third, for their understanding of children, their love for and their sympathy with them.

Fourth, for their self-control. It requires great self-control

for the teacher to keep still and let the children do the work, when she could do it so much quicker and better herself. This is a kind of self-control that few teachers possess to a high degree. Many teachers who lack this control and who enjoy imparting information think that the children are getting educated, when they are merely compelled to listen to the teacher. The group of teachers engaged in teaching these gifted children have learned the lesson of self-control. They appreciate the real significance of education. They never deprive the child of the joy of making an original discovery. I am glad to say that this group of teachers teach less and educate more than any other group with whom I am acquainted.

Fifth, I should say that the teachers are chosen in part for their understanding of the project method, which seems to be especially useful in these classes. Furthermore, they are chosen not only for their understanding of the method, but also for their originality and their ability to adapt that method to the special problems before them. At least, they have that ability to a degree that one does not find in the average teacher. As one visits a dozen or more of these classes, there is a delightful variety and originality that shows that each teacher thinks for herself and adapts her methods to the type of children who make up her group.

Sixth, I should say these teachers are chosen for their happy dispositions, which, of course, are assured by good health. Not that these classes are especially hard on dispositions; in fact, the opposite is the case. But these are classes in which we are trying to provide conditions under which the child may develop his highest efficiency. We are beginning to learn that in schools, as well as in industry, highest efficiency goes with greatest happiness. No one ever does his best work when he is unhappy. The teacher whose attitude or manner habitually makes the children less happy than they might be is out of place in the schoolroom.

Seventh, I do not suppose that these teachers were chosen for their beauty or their pretty dresses, but I am suspicious that whoever chose the teachers bore in mind the maxim of the old Quaker who said to his boy, "Son, do not marry for money, but go where money is." Unless all our theories on the subject are wrong, beauty is an important element in happiness. It is therefore of great importance that the teacher should do her part to supply that beauty in face, figure, and costume as well as in voice, manner, and morals. There is nothing new or novel in this suggestion, but there are still a few teachers in our public schools who think it unnecessary to pay any attention to dress, or who, because they think their features are plain, forget that the right spirit expressing itself in a smile will transform the ugliest face to one pleasant to look on.

Eighth, I should judge that these teachers were, consciously or unconsciously, chosen for their intellectual modesty. At least, I find it true that every one of them is attacking her problem from the standpoint of an investigator. Not one claims to know how to teach a group of gifted children. Each one realizes that it is a new problem, that everything has to be learned, that perhaps nothing that one *has* learned about methods of teaching fits this particular case. With this, we shall have to couple resourcefulness, thus producing the type of individual whose attitude is, "I do not know what is the right way, but we will try this, and if it does not work, we will try something else." With such an attitude there can be no such thing as failure. Mistakes can be made, but they do not produce permanent injury because the disposition which we have described is always ready to correct mistakes, to apologize to a child or the whole group, if necessary, and then to go on with even a better understanding than existed before.

I spoke of apologizing to a child or to the group. There are teachers (as well as other persons) who seem to be unable to

apologize even when they want to. They feel that it is beneath their dignity. That is a mistake. They also feel that they will lose respect. That is contrary to fact. There is no surer way to lose the respect of the group than to try to hide one's mistakes. Conversely, there is no surer way to win esteem than to admit frankly one's error and, where an apology is in order, to apologize. Thereby one exhibits that human quality which is the strongest bond of union. It was said of Agassiz, one of the greatest teachers of all time, "His magic was not far to seek; he was so human."

Gifted children may or may not be quicker than the average to perceive these human qualities, but they never fail to appreciate them. Hence teachers of these classes should be chosen for their humanity and their broad background of human culture. No amount of knowledge or skill or power can compensate for the absence of this quality.

Ninth, I conclude that the teachers were chosen because of their disciplinary ability. In five years I have never heard one of them talk about discipline. I have never seen one of them try to show her power of control of her group. I have never seen a child who needed "disciplining." I have never seen anything but the happiest ideal relations between teacher and children and among the children themselves. That is what I call perfect discipline. The teacher who can maintain such an atmosphere in her room, day after day, is a perfect disciplinarian.

Tenth, I should say that these teachers are chosen because they have an unusually broad-minded view of what education really is. In this connection I am tempted to go over the ground again. I shall, however, confine myself to a brief discussion of one topic that seems especially difficult to carry out in the ordinary class, or in the ordinary family. That is the matter of responsibility. One shudders when one thinks how crude were the old practices, when the teacher decided

everything in the schoolroom and held herself responsible for every child in her sight. She often had the attitude that if a child expressed an opinion it must be wrong simply because it was a child's opinion. Now, that is changing. Unfortunately, one cannot say it is entirely changed, because one still finds teachers who maintain precisely that attitude, and still more often one finds that nearly all teachers occasionally lapse into that state of mind. There are different temperaments among teachers. Some are what we call "domineering." They think they are born to rule and regulate and control and settle. Such a thing as giving a child an opportunity to express an opinion, or still worse, to accept the child's solution of a difficult problem, is unthinkable to them. They cannot seem to realize that the child must not only learn these things as well as his three R's, but that they are vastly more important than anything else he learns. To such teachers (or parents) the thought has never occurred that the child should not only *not* be deprived of responsibility, but that he should be given all the responsibility that he can carry. If he is ever to assume large responsibilities in adult life, as it is to be hoped he will, he must begin in childhood by learning to carry little responsibilities. It is one of the chief delights of an observer of these classes of gifted children, to see the way in which they carry responsibility, the natural way in which the teachers handle the whole situation, leaving everything to the children that can by any possibility be left to them, and the surprising judgment that the children do exercise in the numerous difficult cases. From the first grade to the twelfth one can see the increasing adaptation to the problem of social living. One can see the development in this respect as plainly as he sees it in physical growth. For all this, the teachers are responsible. They have real insight into the situation. They rightly conceive of their problem as that of a manager or director. I have

sometimes likened them to a life guard at the bathing beach. He does not go in and try to rescue everybody in the water, or even teach them to swim; but if anybody gets into trouble, *he is there to help.* The analogy is incomplete, because of course the teacher does much more. The teacher is the one to inspire, to suggest, to encourage; she is not there to impart information as a regular thing. Her great work is to suggest, surely not to command. As we have already stated, that problem is educative which the child works out for himself.

The teacher is the general. She knows the plan of the whole campaign. She knows as well as any one can what the child ought to do next, and it is her business to suggest a problem to the child in such a way that he will accept it as his problem and work it out. It is a surprise and a delight to see how successfully the able teacher manages this. One cannot visit these classes and not get the impression at first that the teacher is doing little or nothing. This is as it should be. It is due to the fact that she has everything so well organized. She is so skillful in suggestion that the children work of their own accord in their own way, on problems that they have accepted and made their own, achieving their own results. These teachers never give orders; they never scold; they never speak in a loud voice; they never find fault; they never get cross. They are always happy and cheerful. They are always polite to the children; they are always devoted and helpful. They are young and attractive; they dress neatly and attractively; they cultivate pleasing voices; they are an educative influence in themselves. They know a great deal about a great many things, but they are not afraid to say, "I don't know," or "That is a good problem for you to look up." They are thoroughly interested in the work and are continually reading and studying to know the latest ideas. They are real educators, and the children are getting a real education.

CHAPTER EIGHT

The Classroom and Its Furnishings

Of the room itself there is little to say. It is one of the regular rooms of the building, and so far the classes have all been established in buildings that are reasonably modern. Consequently the rooms are as a rule large, light, airy, and pleasant.

Of the furnishing and equipment more can be said. With the organization of a new class, the teachers, I believe without exception, have asked to have the fixed desks replaced by the combined desk, chair, and drawer for books. They may easily be pushed back against the wall when the floor space is needed, or they may be grouped as desired upon any particular occasion. Sooner or later, however, the teachers find that tables and chairs are more natural than even these desk chairs. It might be difficult to make this second change, but since many teachers of regular grades are now desirous of getting rid of the fixed desk and substituting the chairs mentioned above, it has generally been possible to make the second change without great expense to the school department. There seems to be no question that tables and chairs are not only more homelike but are better adapted to the kind of work that is now done in these classes. This is surely true in the upper grades.

Every room is provided with a musical instrument of some sort, either an organ or a piano or a victrola. When school funds are low, this item is often cared for by the volunteer citizens' committee.

The next item to be looked after is supplementary books, textbooks, and reference books. The need for these is always very great.

Every room is equipped with a typewriter, of which we shall speak later. Other furnishings not in regular rooms are

such as are required by the interests or plans of the individual teacher, such as aquaria, vivaria, carpenter's bench and tools, easels, drawing boards, puppet stages, etc.

These rooms do not much resemble the regulation schoolroom. They are more nearly like a workshop or a living room at home. This is an important step. It marks progress in education. The greater the difference between the schoolroom and the rooms that the child is familiar with outside of school, the more likely is he to think that the things that are taught him in the schoolroom, especially conduct, *belong to that room and not to others.* And vice versa, the more the schoolroom appearance, atmosphere, and procedure are like that which the child meets outside, the easier it is for him to carry what he learns in the schoolroom to every other time and place. Moreover, the more we realize the importance of comfort and happiness to the child for his efficient working, the more we shall look to his comfort in the schoolroom. As a teacher in a normal school years ago, the writer used to picture a schoolroom with pictures on the walls, comfortable chairs, rugs or carpets on the floor, and net curtains at the windows. In those days this was probably regarded as a joke by most of the students. But now, after a quarter of a century, such ideas are no longer laughable. We realize at last that the room where the child spends some of the happiest hours of his life is an important place in which to give him, incidentally, ideas of comfortable living and appropriate behavior. We have not yet attained the net curtains. The rug has come. At least one room has two small, neat rugs that give a real homelike feeling to the corner where they are placed.

All the rooms for the gifted children in the Cleveland schools are distinctly more homelike and more suitable for the education of youth than the old-fashioned schoolroom. Many regular grade teachers still think that the rugs and the cur-

tains are impracticable because of the difficult work of caring for them — the added work for janitor or some one. These objections arise from a failure fully to comprehend the process of education. It is not the janitor who should take care of these things, but the children. They do it gladly if they are allowed to make it their own problem. And in so doing they learn most valuable lessons.

A professional friend said to the writer recently: "We are upset at our house because we have lost our servant. You know I think we ought not to have a servant in the family where there are two girls fifteen and seventeen years of age." That man was intelligent. He had the right idea. He realized that the servant in his family had deprived his children of the opportunity to acquire useful information and a helpful attitude toward life. The opportunity to learn this lesson is equally important with the opportunity to learn arithmetic or grammar. Those girls have been deprived of the joys of creation. They have never helped create a beautiful home. They know nothing of cooking or of any phase of housekeeping. Their interests are *outside the home.* They look for their amusement, their entertainment, their life, in the theaters, the dance halls, and anywhere except their own home. I immediately contrasted this home with one I know where there never has been a servant — a home with highly intelligent, self-respecting parents and two children, a boy and a girl. These children have always helped, since they were old enough. The home has been *theirs.* Its problems have been *their* problems. And today, when they are graduated from college and are beginning to live more or less independent lives and are only at their home during the vacations, it is nevertheless still *their* home. They are continually putting aside part of their earnings to beautify and improve the home and make it more comfortable for their parents.

A high I.Q. class of children from first, second, and third grades. The children are not posing; this is a normal scene. Note the orange-box chairs made by the children.

Both these families are intelligent, and both have right ideas. In one case circumstances did not favor the carrying out of the ideas, in the other case they did. The one family lived in the city, the other in the country. But the factor of greatest importance for us to note is that these families represent an intelligence possessed by perhaps less than 25 per cent of the population — certainly less than 40 per cent. In other words, two thirds of the families of any community do not and cannot realize this principle. *Therefore, it must be the school that shows the way.*

Fortunately, poverty does compel a large proportion of the people to do without servants, but in many of their homes the work is all done by the mother, and the children are brought up in more or less idleness. Again, it is imperative that the school should train the children, not only to do the work, but to do it cheerfully and with the knowledge that it is honorable and valuable. We reiterate that this is more valuable than the three R's. And yet it is not incompatible with academic work. In fact, it is almost necessary to it. That is to say, children who are thus trained in the *concrete experiences of life* have a better foundation for understanding the abstractions which they study in school. We repeat, the more the life of the school resembles real life, with all its duties and problems, even to the care of curtains and rugs, the more it is contributing to a true education. This does not mean neglect of books, or the so-called academic education. Perhaps it will mean longer school hours; but there will be no objection to that, because under the new system all work, both academic and industrial, will be done with real interest on the part of the children and therefore will not be fatiguing or exacting or disagreeable.

The children in the Cleveland classes for the gifted come early and stay late, of their own accord. They ask to have no recess and only a few minutes for their lunch at noon —

those who do not go home. The teacher is careful to see that this is not overdone, and apparently, as long as the children are happy and occupied with their own problems, it is not overdone. At least these children are, according to the health department, the healthiest children in the entire school system. Our five years of experience in the Cleveland schools have proved beyond a doubt that this atmosphere of real life can be achieved by the methods of the classes for gifted children.

We are beginning to hear the question, "If it can be done with these children, why not with normal children?" There is abundant evidence that it can be and some indications that it soon will be the practice in all schools. It is, of course, possible that there are many things that can be done with these children because of their high intelligence. On the other hand, it may be that this difference will only call for a little more ingenuity on the part of the teacher, a little more faith in the child, a little more willingness to adapt the school to the child rather than to attempt to adapt the child to the school.

CHAPTER NINE

Selecting the Children

Granted that a special class for gifted children is to be formed, questions arise as to what children shall be selected for the class, and how they shall be selected. A cheap and easy answer to both questions is to say that all above a certain I.Q. may be chosen. According to Terman's grouping, those of 140 I.Q. and above are "near genius." Those from 120 to 140, very superior; those from 110 to 120, superior. It would be easier to begin with the "near genius" group, I.Q. 140 and above. If this proved a success, the "very superior" group could be taken in next and, lastly, the "superior" group.

At this point administrative problems arise that have to be taken into account. There must be enough children to form a class large enough to justify the expenditure. Thus the size of the class must be considered. Here we have the usual contest between the ideal and the practical. The ideal is a small class. The practical class is a large one. The size of the class seems generally to be a compromise between these two forces. The budget is made up and salaries established on the basis of a standard class. In Cleveland this is a minimum of thirty-five children. Consequently, if it were satisfactory to put thirty-five children into the special group, it could be done without disturbing the budget. However, many things conspire to make us feel that these classes should contain a much smaller number. Special classes for defectives, when they began, contained from twelve to fifteen children. This was largely because it was realized that much individual instruction must be done and one teacher could not, therefore, take care of very many children. With gifted children the difficulty is, of course, not that of teaching them, but of keeping them busy. With gifted children the thought

has been prominent that we must develop individual capacity and more attention must be given to individual children than is thought to be necessary in the regular grades. Perhaps the strongest argument for a small class is that the problem is a new one and must be given a fair trial. The utilization of the capacities and energies of these bright children is so important that an attempt to make their education more efficient must not be jeopardized by any detail or any procedure which would seem dangerous. Too large a class might easily spoil the whole experiment.

Again, the number depends somewhat upon the methods to be followed in these classes.

It is practically agreed that since these children are exceptionally bright, it is not only safe to try a new method, but new methods are demanded. As already described, the Cleveland classes (and the same is true of most other classes for gifted children) have broken away from the traditional schoolroom discipline and arrangement. A greater freedom, a greater independence of thought and action, more individual and group responsibility, have proved highly satisfactory. The ideal is to make the schoolroom an active workshop, where the children live a natural life. Such an ideal means more space per child or fewer children per room. When children sit quietly in seats which are screwed to the floor, and come in and out in single file, the room can be packed closely. A room 20 by 20 feet can accommodate about thirty-five children, if we allow 9 square feet to a child. This will leave about $4\frac{1}{2}$ feet in the front of the room for the teacher's desk and other equipment. The moment we introduce the idea of a larger freedom, and each child working his own problem on his own responsibility, with freedom of movement and action as is necessary, the room with thirty-five becomes too crowded for effective work.

The accepted plan in Cleveland has contemplated a maxi-

mum of twenty-five children for these special classes. This plan was followed for about three years, when it was decided to try the experiment, in a few classes, of raising the number to thirty-five, the same as required in the regular grades. After about a year's trial this was abandoned and a return made to twenty-five. It was the unanimous opinion of the teachers, principals, supervisors, and superintendents that there was a distinct loss of efficiency as the result of the added number. Twenty-five appears to be a satisfactory group. All classes contain both boys and girls. There is one teacher and no assistant, except the departmental work which is done by other teachers who come to the room for special subjects such as art or French.

Let us assume that a class of twenty-five gifted children has been decided upon. Where shall we find twenty-five bright children? How many bright children are there among groups of school pupils? To the last question there is no absolute answer, but we do find certain data helpful.

Our Vineland testing of an entire school system of 2000 children, made in 1910,[1] gives 1.1 per cent of the children in the "near genius" class — that is, having 140 I.Q. and above; 5.5 per cent were in the "very superior" group — I.Q. 120 to 140; and 14 per cent in the "superior" group — I.Q. 110 to 120. While these figures are suggestive, they must not be taken as highly significant, for the reason that this work was done in the very beginning of the use of the Binet scale. Again, this was practically a rural population, a good farming community, with a different distribution of intelligence from that found in large cities.

Terman has given us the ratings on 1000 school children. He found:

.55 per cent with I.Q.'s ranging from 136 to 145;
11.3 per cent with I.Q.'s ranging from 116 to 135;
23.1 per cent with I.Q.'s ranging from 106 to 115.

[1] *Pedagogical Seminary*, June, 1911.

These figures do not fit his other classifications, but he mentions in another place that in a city of average population only about one child in 250 or 300 would test as high as 140 I.Q. — that is, about .4 of 1 per cent. In another place he tells us that of the 1000 children upon whom these statistics are based,

1 per cent reach an I.Q. of 130, or above;
3 per cent reach an I.Q. of 125, or above;
5 per cent reach an I.Q. of 122, or above;
10 per cent reach an I.Q. of 116, or above;
15 per cent reach an I.Q. of 113, or above;
20 per cent reach an I.Q. of 110, or above.

Now, then, if we attempt to put into our classes only Terman's "near genius" group, we can expect to find among the school children .4 of 1 per cent who can qualify. If in addition to these we should take those included in his "very superior" group, we may expect to find about 6 per cent (5 per cent includes I.Q. of 122) of the children available, whereas, if we include his "superior" class — that is, all above 110 — we shall have 20 per cent of the school population. It is probable that there would need to be two or three separate groupings if the upper 20 per cent were chosen for special classes. That is, it is probably as undesirable to have in one group children ranging from an I.Q. of 110 to an I.Q. of 150 or above, as it is to have children ranging from an I.Q. of 80 to 120.

Dr. Leta Hollingworth, in her book entitled *Gifted Children*, arbitrarily defines gifted children as "the highest 1 per cent of school children." According to Terman's classification already quoted, the top 1 per cent would include all children having an I.Q. of 130 or above. As a definition of a gifted child, there can be no quarrel with this suggestion. As a limit for determining who shall be in classes for bright pupils, it has the objection that it includes only a small percentage of

those who need special instruction. Moreover, such children are, as we shall see, so widely scattered in any school system that it will generally be an administrative impossibility to form a class of that type.

Now let us see what these facts indicate for our problem of getting together twenty-five gifted children for a special class. The Cleveland schools in which it has been found feasible to establish these classes range in population from about 500 to approximately 1500. Let us take the largest group. If we attempted to confine ourselves to the "genius" group, we should expect to find in this school about eight children (.55 per cent of 1500). If we followed Dr. Hollingworth's usage of the term, we should take 1 per cent, or 15 children. Of course, there is the possibility that the school may be located in a community having a select group of people, so that the percentage of gifted children would run much higher. On the other hand, there is an equal possibility that the percentage would run much lower in a less-favored community. If we should decide to include the "very superior" group, thus selecting all who rank above 120 I.Q., we should expect to find about 90 children. But the children that would compose these groups are scattered through the entire school, including kindergarten and the eight grades. Here we are brought face to face with another problem.

From how many different grades can we take children for a single high I.Q. class? Certainly not from the entire range. One's first impression is that they should all come from one grade, so that the teacher of the special class might have a thoroughly homogeneous group. We see, however, even if we are to take in the entire group of all children who test above 120 I.Q., we have only 90 children in the entire school or 10 from each grade, if they are evenly distributed. Only by including the "superior" group with an I.Q. of 110 to 120, are we able to get our 25 children from a single grade. Twenty

per cent of the 1500 children would be 300, or an average of 33 to a grade. Remember, too, that we are considering the largest school in which a special class has been established. If we consider the smallest school of 500 children, we shall take one third as many children as in the foregoing discussion. In a school of 4500 our groups would be three times as large as those we have considered. Even then Dr. Hollingworth's 1 per cent would give only 45 in the entire school, or 5 to a grade (not to a room).

Here, then, is the situation in our school of 1500 children:

A class of "near geniuses" — I.Q. 140 and above — is out of the question, as we can expect only 8 in the entire school, or 1 to a grade.

Dr. Hollingworth's 1 per cent gives us less than 2 to a grade. Including the "very superior" group — I.Q. 120 — we could count on 10 to a grade.

Finally, including "superiors" — I.Q. 110 — we have 33 to a grade.

In a school of 1500 we can get our 25 children from one grade only by lowering our standard to an I.Q. of 110. If we keep it at 120, we have 10 children in each grade.

There are now three options before us. First, we may take our 10 "very superior" children and add 15 from the "superior" group. Second, we may take our 10 with the I.Q. of 120 and above out of one grade, 10 out of the next grade, and 5 out of a third grade. Third, we can go to other schools, not too far away, and then transfer bright children from those schools, to make up our special class in the school where we started.

As a matter of fact, it has been necessary to resort to all three of these methods in different proportions in order to get the classes established in the various schools in Cleveland. Most of the classes have children from three grades, such as the first, second, and third. Some have pupils from only

two grades, and one included children from four grades for a short time. Some of the classes have some children with an I.Q. lower than 120, and all of the classes are made up of children from different schools.

It is a significant fact that none of these makeshifts, if we may call them such, has proved to be seriously detrimental to the work. Three groups instead of one have proved to be an advantage. The teachers do not object to it, and it is probable that it is good for the children. Apparently, these bright children need the attention of the teacher not more than a third of the time. For the rest of the time it is good for them to be on their own responsibility, or, at least, to be assisting each other. Moreover, it comes much nearer to individual work for the teacher to be attending to eight children at a time rather than to twenty-five. Nor is there any difficulty socially. The children work together in perfect harmony on all those matters that require the coöperation of the whole group.

It has been the policy for the same teacher to follow her class through the elementary school, except where there are two classes in one school. When the time comes for promotion to the junior high school, only one grade is, of course, ready; this leaves a nucleus to carry on the traditions of the room for the newcomers. This has some advantages. On the whole, then, it is quite possible that the three grades are a distinct advantage rather than otherwise. Four grades are undesirable.

The desirability of placing in these classes children having I.Q.'s as low as 110 may be seriously questioned. While a child of I.Q. 110 is undoubtedly in need of treatment different from that given the "average" group, on the other hand he is distinctly inferior to those with I.Q.'s of 120. Sometimes he seems to be a victim of the same kind of discouragement that the dull child feels when in the regular grade. When it is

necessary to put a child of 110 I.Q. in such a class, one ought to be sure that all the other conditions are favorable; and it probably ought to be made clear to the parents of such a child that it is merely an experiment and that the work may prove too difficult for him, in which case he must return to his regular grade.

The third of these options, the bringing of children from other schools, is, in some instances, of no significance. If the child lives as near to one school as the other, it is of no importance to which school he goes. However, that is a rare occurrence. Generally it happens that the child has a greater distance to go, sometimes necessitating his going on the street car, or even taking two lines of cars. This involves extra expense, which is sometimes a hardship to parents. In these cases tickets are furnished from a special fund. The ultimate solution of this difficulty may be the transportation of such children in a school bus at public expense. This is no more than is now being done, for example, for the cripples. If the cripples appeal to our sympathy, as they may properly do, the gifted child should appeal to our intelligence and sense of justice. He will eventually more than repay all that we do for him.

Taking two lines of cars is not advisable, except in the case of older children who are perfectly capable and dependable in such matters. If the parents object to the transfer to the new school, it is not made.

We have so far discussed the formation of the special class for the gifted from the standpoint of the intelligence level, as expressed by the term "I.Q." We have now to point out that the I.Q. is not or should not be the sole determiner of membership in the class. It is true that it is the most fundamental criterion. That is to say, the children must have superior intelligence. The great mass of children who go into these classes go in solely on the basis of their I.Q. There will

always be other reasons, however, which must be considered in the selection.

It is a pernicious practice to establish a fixed I.Q. standard above which every child may go into a special class of gifted children, and below which no child may enter such a class. I realize that, in saying this, I am making it hard for school authorities, especially in the larger cities where there is such a mass of routine work that every executive feels the strongest pressure to reduce everything possible to a fixed rule so as to save time and worry and so that subordinates can apply the rule and thus save the time and efforts of the chief. Nevertheless, in this matter there is too much at stake, not only for the child, but for the success of the system and for the progress of true education. Experience has already shown that other factors are of vital importance.

While the Binet tests are marvelously accurate, they are nevertheless not infallible; and when we say that a child of 120 I.Q. shall go into a certain class, and a child of 119 shall not, we are practically assuming infallibility. Moreover, even if the tests were infallible, examiners are not. There are, unfortunately, many poorly trained examiners. There are some persons who are temperamentally unfit to give mental tests; and the tests are sometimes given under such conditions that exact results could not be expected.

There is another condition to which too little attention has been given. There are many psychopathic or unstable children in the schools. In the case of these children the I.Q. is often valueless and always likely to be misleading. Their test will show one mental age today and a different one tomorrow. If seriously psychopathic, they should of course not be permitted to attend school at all. Some children are, however, emotionally unstable only to a mild degree, and then it becomes a serious problem as to what class they should be placed in. Sometimes a *change* is what is most needed.

Another class of the same grade, with new associates or a teacher with a different personality, may be the solution. If the child is at all superior, perhaps the special class with its unusual freedom is just the place for him even though his I.Q., as far as it can be determined, does not seem to be up to the standard. But even if the I.Q. has been perfectly determined, there are other factors that should be taken into account.

If the teacher in whose room the child has been is of broad experience and high culture, her opinion should be given weight. Investigations have proved that as a rule the teacher's judgment of the mentality of a child is notoriously bad. There are exceptions. Bad judgment on this question is not necessarily any reflection on the teacher. She may be young and inexperienced. If experienced, she is still subject to many prejudices of which she is unconscious or over which she has no control. Of the numerous factors that determine one's appreciation of and attitude toward a child, some are objective and some are personal, some are significant and some are negligible. To evaluate them all correctly is often not possible for the teacher any more than for the mother. She is too near to have perspective. For this reason we say that only in special cases can her judgment be given weight.

Some of the other factors that should be considered are: home conditions, the child's health, his happiness, and his conduct. We shall consider these separately.

Experience has proved that success is doubtful where the child comes from a home in which there is not intelligent coöperation with the school. Some parents are so elated at having their child selected for such a class that they continually put wrong notions into the mind of the child. Some expect a child to do more than even a gifted child can do. They crowd him with work or scold him because he does not do more. A certain type of parent is constantly at the

school, complaining because his child is not favored in every way. It may seem unfair to the child to keep him out of the class and thus deprive him of this opportunity, merely because he has a cranky father or an impatient mother; nevertheless, there is perhaps nothing else to do and in the long run the child will be happier and perhaps make a greater success by remaining in the regular grade.

The health of the candidate for the gifted class is, of course, to be considered, but not always in the way one would at first expect. Sometimes the special class is the best prescription for the sickly child. The naturalness of the life in these classes, the freedom from drive, the freedom to move about at will, ofttimes constitute just the relief that the child needs to bring him to good health. On the other hand there are, of course, cases where ill health, taken into consideration with other factors, should keep him out of such a class.

Happiness is closely related to health, especially in childhood, and many a child is unhappy in his regular group, who becomes immediately transformed under the conditions existing in the special class — so that when there is room, a child of a somewhat lower I.Q. might very properly be placed in one of these classes if it seems probable that it may change him from a condition of unhappiness to one of happiness.

Conduct should not infrequently be the determining factor — and this again in the opposite direction from that which one at first imagines. Many a "bad" boy has been saved by placing him in a class for gifted children. I fear that most teachers will be inclined to say, "John has the intelligence to be in that class, but he is a bad boy;" and some teachers will even stand out strongly with the argument that it will spoil the morale of the whole school if the worst boy in the class is thus honored by being placed in this class for special children. There is a difficulty, to be sure, and we do not want to err on the other side, by seeming to make a rule

that a child whose conduct is unsatisfactory is thereby a candidate for this class and must be placed in it. It is another illustration of the need for analysis. It must be determined just why the boy's conduct is unsatisfactory. There is much unsatisfactory conduct that is due to causes for which the child is not responsible and consequently should not be punished. Very frequently the bright child — and we are speaking now of children who are really bright — gets into mischief because he does not have enough to do. To this argument the teacher will sometimes reply that he does not even do his assignment. This is another form of a general difficulty. The child, because of his higher intelligence, is not interested in any of the work that is assigned him and consequently he does not do it. With such children it is useless to say, "When you do this work well, we will give you some other work to do." There might, of course, be a case where the child's conduct was of such a character that it would be unwise to put him into the special class. However, I am quite satisfied that if a child really has sufficient intelligence, the chances of the new conditions straightening him out are far greater than the chances of his contaminating the class by continuing in his evil conduct.

It will be seen that in all this we have assumed that the child's I.Q. *is* high, though perhaps not quite up to the standard. If there is any doubt on this point, a more thorough mental test should be given in an effort to ascertain the fact.

CHAPTER TEN

The Atmosphere of a Class for Gifted Children

To some old-fashioned teachers, the atmosphere of the classrooms which we have described would be intolerable. There is no formality, no regularity, no silence, except upon very special occasions or for a few seconds. There are no straight rows of seats. There are no repeated commands to "sit up straight." There is almost nothing that savors of the old-time schoolroom. There is simply a group of twenty or twenty-five children, living, working at their own problems, problems which may have been suggested to them but which they have accepted and made their own. At first sight there might seem to be confusion and disorder, but it is the confusion and disorder of the beehive — nothing else. Every child is self-directing, but not self-centered. He is doing his work; he may be working in coöperation with others or by himself. He can do it either way. He is both self-reliant and coöperative. He doesn't ask, "May I get a pencil?" He goes and gets it, or a piece of paper or a book. If on his way to get the book he sees something that interests him and he stops to look at it, no one shouts at him to take his seat. If something strikes him as being funny, he laughs and no one reproves him unless he laughs unbecomingly loud, in which case very likely another child says, "William, I shouldn't laugh so loud as that; it isn't polite." And William accepts the reproof good-naturedly and has learned another lesson. Perhaps it is the teacher who suggests in a very quiet and pleasant voice that if William could enjoy himself without laughing quite so loud it would be better; and again William is quick to learn and obey.

It matters not what phase of school life we choose to discuss or examine, we find the same naturalness, the same pleasing behavior and performance — pleasing be-

cause it is all so natural, so true to life, consequently *real* education.

We walk into the room for our visit. Instantly there is a little commotion as three or four, perhaps five or six, boys rush to get us chairs. This courtesy done, they get back to work, and in a few seconds you would not know that we were there. For the rest of the time the children pay no more attention to us than if we were not there unless we take some part in the work or exercises.

Here is a girl sitting at a table, working away at something. I notice that she is sitting on her foot. How girls love to sit that way — and why should they not? She is looking up something in the encyclopedia, some question that came up in the class and she was appointed a committee to look the matter up. Across the room is a boy working all by himself. He seems to be both reading and writing. I go to him and look over his shoulder. He is working in long division, but he has no arithmetic near him. It seems to be a reading book that he is using. Finally I accost him, saying, "What are you doing, my son?" He looks up, pleased at an opportunity to explain, and answers as follows:

"I just read in this book that the exports of Alaska last year were valued at $54,938,171. I remembered that our history lesson taught us that we paid Russia $7,200,000 for the whole territory. I have just subtracted to see how much more we got in one year than we paid for it." "But you were dividing; what was that?" "Oh, yes, when you spoke, I was dividing $54,938,171 by $7,200,000 to see how many times the cost were the exports for one year."

Here was a boy whose reading had set him to thinking. He read a statement which suggested a fact that he had previously learned, and he set himself the problem in arithmetic as stated. The difference in educational value between those two problems and any two similar problems in the arithmetic

book cannot be estimated. It is almost infinite. In this case the boy was thinking. He was setting himself a task and was working it out. Because he was interested, it meant everything to him. In the solving of two similar problems set as exercises in arithmetic, the task might mean almost nothing because he was not interested. Those would not be his problems and he would only be doing them because he was commanded to do so.

In another part of the room an older group of children are having a conference on what they have learned about a certain period of Egyptian history. They have been doing their own reading wherever they could find it, and now they are going to discuss the matter and compare notes. A member of the group acts as a sort of moderator and calls upon one of the boys to tell what he has found. As the speaker proceeds, another boy indicates that he would like to make a statement. He is recognized by the chairman and, standing up, politely announces that he doesn't think the first speaker has it right. Well, how was it? He then tells how he understood it. The two views are quite different; the first boy stands by his point of view, and the chairman asks if any of the rest of the class have any views on that point. But none of them has happened to read on that phase of the subject. Then it is that the teacher is needed — the "life saver." She reminds them that when we disagree, we have to quote our authorities, whereupon each boy goes to the bookcase and gets his authority and reads the statement. Each has correctly reported; so then the teacher comes in again. She reminds them that when authorities disagree, the reader must determine, if he can, which is the better authority; so she asks the first boy who the author of his book is. He quickly turns to the title page and reports. Her comment is that the man is a good authority, that they have read much from him and generally found him to be accurate. The second boy is then asked for

his authority. Unable to find any author's name on the title page, he takes it to the teacher, who, glancing at the page, reads, "Compiled by the American Sunday School Union." The teacher then explains what a compilation is and how it leaves us in the dark as to who is the real authority for the statement. Thus this little matter has been settled. But, be it noted, every step in it has been educative, a bit of real life. The conference then proceeds most satisfactorily.

These were sixth-grade children, but they discussed this epoch of Egyptian history in a way that would have done credit to any adult reading circle. There were no lapses; there were no children who had "not got their lesson"; there were no excuses; no boy had lost his book, nor were there any of those disturbances that are frequently so annoying in the regular grade work. Every child had been solving his own problem, and he had worked faithfully, intelligently, and persistently at it.

Let us take a look into another room. These are first-, second-, and third-grade children. The third grade has just asked the teacher if she will hear them read; so they have formed a little circle in one corner of the room — she sitting in a chair the same size as theirs, they conducting the reading lesson while she listens. Occasionally they appeal to her for a decision, or she makes a suggestion that is useful; and so they are educating themselves.

I walk over to the other corner. There are six little first graders. They are standing in front of the reading chart. The smallest boy of the group seems to be acting as teacher. He points to a word on the chart, and the child works it out and pronounces it. If any child does not agree with him, they discuss it; and if they finally do not agree, they put it aside to ask the teacher. Again, *real* education, because they are solving their own problems. They are thinking in their childish way; they are not mechanically doing what somebody else has told them to do.

A dramatization by the sixth-grade group.

There is still a third group over in the other corner. These are the second graders, and they are doing spelling. They have elected a little girl to be the teacher, and after a minute or two of observation we know why they elected her. She is a real teacher and they evidently felt it. As we watch from our position in the background, we note that one boy somewhat larger than the others seems to think it is the proper time to have a little fun on his own account. He accordingly spells and pronounces the word assigned him with an inflection and a manner that attract attention. The little teacher quickly scents mischief and stamps her foot and says emphatically, "William!" That is all. William knows now who is the mistress of the situation, and he makes no further attempt at that kind of fun.

Many times have I been asked about the discipline of these classes. Discipline is the most important word in the American teacher's vocabulary. She is engaged or rejected on the basis of her probable success as a disciplinarian. Her employer usually asks only one other question, "Does she know her subjects?" If she knows her subjects and can discipline, she is considered to be satisfactory. Even if she does not know her subjects so well as could be desired, if she is famous for discipline, her position is still secure. Hence, it is natural that the old-line school teacher should ask when speaking of these classes, "What about the discipline?" "Discipline, what do you mean by discipline?" "Why, punishment — what kind of punishment do you use?" "Oh, we don't use any." "Well, what do you do with the children when they are bad?" "Why, they are never bad." "Oh, I mean when they are disobedient or don't do their work." "But there is no such thing as disobedience in these classes. There is no such thing as not doing their work." "Do you mean to tell me you have no problem of discipline in these classes?" "Just that. I have been observing these classes

for five years. I have spent a half day at a time in a single class, and I have never seen a case of discipline. I have never seen a child that needed disciplining."[1] "But," says my interlocutor, "that is immoral." "What do you mean by that?" "Why, you cannot develop morals in children, inculcate moral ideas, unless you punish them for wrongdoing." "Do you mean to say that children who are trained under a system whereby they do not want to do anything wrong will grow up immoral?" "No, I don't mean that, but I never saw a group of children yet that didn't sometime need discipline. And I think something is wrong with your class if you don't have to do any disciplining." "Oh, we are disciplining all the time, only by such a different method that you would never recognize it as such. Our children *want* to do the *right* thing. They are continually making little mistakes, but their little mistakes are quickly and easily corrected without the necessity of any punishment or any scolding. And because they are brought up to it, they accept the correction pleasantly. So everybody is happy and all our time is devoted to getting a real education, real living."

This is the atmosphere of the classes in these rooms of gifted children. There seems to be no real reason why the same condition should not prevail in classes for the average child as well.

[1] This is probably an overstatement. It is true that I have never seen a case of discipline in these classes. But I am not there all the time. It seems hardly possible that sometime some child should not get "out of sorts" and have to be given more strict treatment, or that misunderstandings should not arise that require "straightening out." Nevertheless, the statement in the text expresses the spirit of the classes and relative to the ordinary school is absolutely correct. AUTHOR.

CHAPTER ELEVEN

Locating the Class

In establishing a new enterprise, it is necessary to consider many details that could safely be overlooked if one were merely continuing routine work. The success of the movement for special classes for gifted children is so important, both to the children and to the community, that every precaution must be taken to insure success. The first question that a superintendent who desires to start this work will ask himself is, "In what school or building shall we put this class?" Of course, he will consider the geographical situation, the social status of the community, available rooms, and all such questions.

These are important things to consider, but experience teaches that they are not the most important. The first consideration should be the attitude of the principal in whose building this class is to be located. If the principal is not, or cannot be brought to be, entirely in sympathy with the movement, it is worse than useless to attempt to start the work.

All must understand, what most *will* understand, that in discussing freely this matter, we are casting no reflections upon any one. The principal who does not believe in these classes has a perfect right to his or her opinion and is not to be criticized because he cannot change those opinions. Some principals will say, "I do not believe in it, but I am willing to give it a fair trial." To this I should reply, "I believe you are willing, but I do not believe that you *could* give it a fair trial." The spirit is willing, but the flesh is weak. In making such a statement, I am not reflecting upon the individual principal. I am merely drawing from my experience and my knowledge of human nature. The human mind is not so constituted that an individual can give his wholehearted support to any cause in which he does not believe.

Therefore, I say, do not start a special class under a principal who is not thoroughly sympathetic. There is too much at stake to take the risk.

We have already described the teacher of such a class. It goes without saying that the principal of such a school should have all the qualities desired of the special teacher, and more. It should be fully realized that the special class is not simply one more class for the principal to look after. It presents a new and complex situation. It adds to her labors, and from it problems continually arise that must be solved. For this reason, again, the class should not be placed under a principal who is not highly appreciative and glad to face these problems for the sake of the cause.

In an earlier chapter we answered some of the objections usually urged against these classes. One of these was that they would tend to make the children conceited. We there stated that, as a matter of fact, this does not occur. We are now in a position to discuss an allied problem where the tact and judgment of the principal are the all-determining factors in producing a satisfactory condition instead of an undesirable one. We have already stated that the attitude of these children toward their own work and toward each other is as nearly ideal as one could wish; but the attitude of these children toward the other children of the school, and the attitude of the other children toward them, are matters which must be carefully handled. Of equal importance is the attitude of other teachers of the school toward this class. These are both matters primarily for the principal. That is to say, her attitude and her manner of meeting the situation will determine, practically, whether the result is to be good or bad.

Another point to be considered is the question of what may be called publicity. If the new class is established under conditions which inevitably attract much attention to it, a

good foundation for future trouble is laid. If, on the other hand, the movement is quietly carried through with no comments, no announcements, directly or indirectly, that these are specially bright children, then the class starts with no prejudices against it. If this attitude is continued and the class is shown no special favors, both teacher and pupils taking their places in the school like any other group, there is not likely to be any disturbance.

On the other hand, if anything in the situation prompts the other children to point to these boys and girls as "specials," or if any teacher should refer to them as those children who think they are especially bright (and unfortunately this has been done in some places), then a jealousy is aroused, the end of which no one can predict. It is obvious that in all of this, the principal's attitude may be the determining factor. If she listens to complaint or smiles at some witticism of which this class is the butt, or even if she allows herself to talk much about this class, either in praise or criticism, she is paving the way for trouble which not only may destroy the work of the class but may produce a damaging state of mind in the pupils.

I am glad to say that during five years of observation I have known of no difficulties of this kind. Sometimes we have thought we detected the beginning of an undesirable attitude in the school; but once it came to attention, the tact of the principal was sufficient to overcome it entirely.

Not only have the principals handled these matters with great tact and wisdom, but both principals and supervisors have shown excellent judgment in the directing of the work of the classes. They have been able and willing to keep "hands off" to a very unusual degree. Of course, this has been possible because they have had teachers in whom they had great confidence. This is as it should be. Their criticisms have been universally constructive and not discourag-

ing. There are differences, of course, in their ways and manner. All seem to want the teachers to feel that they are working *with* them, not *over* them. Naturally, some are a bit more successful at this than others. Such differences are inherent in human nature. Sometimes it has been hard for some of the older principals, seeing these classes going on in the free way that they do, to understand all that is being accomplished. We have referred in an earlier chapter to the principal who said to the writer, "Yes, it is very interesting, the children are happy, the teacher works hard and is enthusiastic, but I cannot help feeling that they ought to be getting their English." However, that principal has given the teacher free rein. She can teach what she wishes, when she wishes, by any method she wishes. She does not even have a daily time schedule. All of which is remarkably fine and just as it should be — all the more remarkable, and to the credit of that principal, who in her heart could not quite give up worrying because the children were not getting their English in the way they used to get it. The old tradition, made sacred by a long experience, could not be entirely overcome, and it was tremendously to her credit that she could bring herself to give the teacher this freedom even when she could not bring herself to be quite satisfied with it. That shows a big mind. It shows the spirit not only of the true educator but also of the expert manager. For, after all, a principal is in a position to see the situation in perspective, not in its details. The teacher knows the details and should be competent to manage them. These, I take it, are the complementary functions of principal and teacher.

For example, suppose this special class should decide that they did not want to go so quickly from one subject to another; that instead of spending an hour on arithmetic, an hour on history, an hour on reading, and so on, they should ask the teacher if they could spend Monday on their history,

Tuesday on their geography, Wednesday on their arithmetic, Thursday on English, and Friday on whatever is left. Suppose the teacher, knowing the children, knowing the way they work, knowing all the conditions existing in the school, should conclude that this would be a good plan to follow; so she agrees to it, and they proceed on that basis. How does the principal come into such a program? I am trying to put myself in such a position. If in my reading or in my experience I had known of that plan being tried and that it had been a failure, and if the conditions were essentially the same as in this instance, then I should say to the teacher, "This will not work for the following reasons." If, on the other hand, I knew of no such objections, I should either say nothing, or else say, "It is certainly worth trying; we will see how it works." I should watch it carefully, and after a few weeks I should expect to be able to see the whole situation in perspective and be able to point out to the teacher wherein it was a great success or a failure.

The reader has already caught my main thesis in this book, that the problem of the education of the gifted child is a *new problem* and no one has the solution. Therefore no one can say that we must do that and not do this. We must try new methods, and it goes without saying that twenty teachers in daily contact with these bright children will think of more new methods and procedures than the principal in her office or the superintendent at his desk could ever conceive of. Moreover, one of the beauties of the situation is that these children have so much time to spare that it is perfectly justifiable to make experiments. We are not jeopardizing their success in their regular school work. They can do all the regular work, and are doing it, in approximately half the time which they spend in school. We may wisely devote the other half to making experiments. Without question, the teacher will think of many experiments to try,

which the principal who is able to see things in perspective will recognize immediately as not worth trying. But this should not be a matter of doubt on the part of the teacher or the principal. If she is at all in doubt, if the conditions when previously tried were different, or if the method has been known to fail but it seems at all likely that it might succeed under the new conditions, it is by all means worth trying. The time and effort will not *all* be lost; it will be worth something even though it does not lead *just* where we want to go.

I have often heard children in these special classes ask the teacher something to which she replied, "Don't ask me, that is your problem. What do *you* think about it?" Sometimes the child says, "I don't know." And the teacher then replies, "Well, try and see." I regard that as the true spirit of education. She is training the child to do here in simple matters what he must do in life in large matters if he ever makes a worth-while contribution to civilization. I am always glad when I see the same principle higher up and the principal says to the teacher, "This is your problem," or the superintendent says to the principal, " That's your problem." Of course, it goes without saying that superintendent, principal, and teacher must often say, "No, that won't do." Nevertheless, with the true spirit of education in mind, they will more and more discover opportunities for placing the responsibility farther down.

It has been a constant joy during the five years that I have been a silent observer of this work, to see the extent to which this spirit has prevailed. And I think I may properly add that while I have noted differences, the advantages have always been in favor of the greater freedom; and strangely enough, the greater freedom on the part of the principal has been coupled with the greatest perspective. Much of this is also due to the way the human mind works.

Perhaps the person who does not grant the freedom does not have the vision, is not able to see far, consequently is not able to let go; while the one of large perspective is not afraid because she knows just how to control the situation the moment there is liability of error.

The foregoing discussion could all be summed up by saying, these classes should be located in a building where the principal is an educator and not simply a person who "keeps school." Perhaps I have only convinced the reader that a class of high I.Q. children should be taught by a high I.Q. teacher in a school where there is a high I.Q. principal, under the direction of a high I.Q. supervisor, the whole controlled by a high I.Q. assistant superintendent and a high I.Q. superintendent. I do not like to make it appear that the movement requires such ideal conditions, but unfortunately for me I am in no position to deny the conclusion, because those are the conditions that exist in the city of Cleveland. If the reader concludes that such conditions must be the result of the high I.Q. board of education, again I shall not demur, but only add, it takes an intelligent people to elect such a board of education.

I trust the reader will not think that I am merely "throwing bouquets." I have a far deeper purpose; namely, to show that when the intelligent people of a community decide that by far the most important problem they ever have to deal with is the problem of education, they will then devote the necessary attention, time, effort, and money to securing the very best people to serve them in this capacity, from school board through superintendent to teacher. Still better, the sooner we begin to educate effectively our bright and gifted children, the sooner we shall have a body of highly intelligent people in our community who can carry these things through.

Locate the high I.Q. class carefully!

CHAPTER TWELVE

Enrichment

We have emphasized the fact that the purpose of the classes for gifted children in Cleveland was not rapid progress, but rather that it was enrichment. We must now explain what that term includes.

Enrichment is doubtless what the teacher has in mind when she repeatedly exclaims, "If we only had more time!" The curriculum as we now have it has been so developed as just about to take up all the time of the average child. With the gifted child the case is different. He has more time than the curriculum demands, provided we do not try to rush him through the grades; this latter alternative we have found to be detrimental to the child because it brings him into high school and college while he is still too immature to profit by his opportunity. The gifted child can do all the work required by the curriculum in half the time allotted to it, so that, in the case of the gifted child, the teacher's wish for more time can be realized. With these children it is possible to do many of the things that every teacher has longed to do with school children.

In Cleveland, not much of the special class work is prescribed. Most of it is left to the judgment of the teacher, the principal, and the supervisor. French, however, is one of the required enrichments. It is excellently taught by thoroughly competent teachers, using the natural method. It is a delight to see the enthusiasm with which the children take up this new language.

One of the characteristics of the gifted child is that he requires much less drill than the average child — approximately half as much. This means, of course, that in the early grades he usually learns his reading and numbers very quickly. Once he is started in reading, there is, of course, no

A puppet show by first-, second-, and third-grade group. Stage and scenery were made by the children.

end to the opportunity. However, even reading becomes tiresome after a time, and therefore much of the day is devoted to various other occupations, all of which are educative and useful.

Children in these classes begin early to dramatize what they read and thus get a real foundation for their more advanced work. Much of the work is carried on by the project method, which the children thoroughly enjoy. The children spend much time on their English, but not in the usual way. They not only read and dramatize, but they write their own stories, expressing their own ideas in their own way. Some of their work in this line will be found in Part II. As they get older, they become greatly interested in history, geography, and travel. Of course, all of these furnish an abundance of

material upon which they can profitably spend as much time as they wish.

It is often thought that gifted children are inclined to be bookish, that they are interested in little except reading. It is now known that this is not true. It seems to be wholly a question of motivation. These children quickly become interested in mechanics, manual training, physical culture, music, foreign language, typewriting, nature study, art, anything that is within the reach of their mentality and which is presented to them in the right way. They are learning English in the only rational way, by reading quantities of the best English and noting the way the writers express themselves. Then, when they come to write their own productions, they both consciously and unconsciously imitate their models. Their teachers are wise enough to leave them largely free in their method of expression — pointing out, of course, any real errors, but beyond that not disturbing the child's sentences, except perhaps to say, "You could have expressed it this way," or, "If you had used that word, it would have expressed what you meant a little more clearly."

One of the most valuable sources of enrichment is in visits made to various industries and establishments about the city. I shall let Mrs. Pearl D. Bowers tell about this work, by including here a full report that she made to me. She has conducted nearly all the classes on their inspection trips up to the present time and therefore knows this phase of the work thoroughly.

She reports as follows:

Field Work in the Enrichment Classes

A varied intellectual ration is needed for our gifted children, rather than a speeding up. The enrichment of the curriculum is a difficult aspect of the experiment. One means of enrichment was found in field trips to outside activities. Field work, excursions, or trips are

not new in education. Almost every teacher makes at least one trip a year (and feels relieved when it is over). The bravest of them may go two or three times.

In our Cleveland system practically every sixth grade goes to the Art Museum and to the Natural History Museum once a year.

In our enrichment classes the field trips are not taken for recreation. Nor are they a means for giving the children isolated information on new topics. Each class makes an average of fifteen trips a year. Each trip is motivated by the topic that is being studied at the time. If the class is studying Scott and reading about armor, they take a trip to the museum to see the different kinds. If they are studying civics, they visit the police station, the courts, and the post office. Always, the trip supplies the concrete demonstration of the topic under discussion at school. The Art Museum, the Natural History Museum, the industrial institutions, and the "great open spaces" all contribute to the illumination of the subjects studied.

These trips have generally been made under the supervision and personal escort of one worker for all the classes. She confers with the teachers upon the *kind of material needed* and then makes all the necessary arrangements and accompanies the classes when the trip is made. Since the trips are frequent, car fare might easily become an item of concern to some of the families. To avoid embarrassment, the Educational Committee provides the car fare for *all* children on these trips.

The growth of the field work is in itself an interesting story. In the beginning, when there was but one class and all were feeling their way in the experiment, the trips were to a few of the factories and industries, such as the Plain Dealer, the Star Baking Company, and Fairchild's Flour Mills. These trips were planned to give the children experiences as a basis for oral and written English. A little later it was found that geography could be strongly motivated by these trips. Then came the trips to the Natural History Museum and the Art Museum.

Here we were faced with a real problem. These gifted children were not satisfied with the information that one visit could provide, and they asked for a return trip. They had received just a taste and were eager for more. The worker told her troubles to the proper authorities in both museums, and it was decided to break away from the traditional yearly trip and give these children a series of lessons. This meant the preparation of extra lesson plans and additional ma-

terial to be used in each museum, but this was done freely by the museum personnel. Much of the success of the field work has been due to the coöperation given by the workers in both museums. The trips to the museums continue to be the backbone of our work for all the grades, from the wee ones with their Indian work to the junior high pupils with their study of geometric figures.

I have been asked by many just what we study in the Art Museum that justifies a series of four, five, or sometimes six lessons. It is surprising how much help we have received in connection with other school subjects as well as with the picture study work which one regards as a regular art topic.

In history, the art and writings of the ancient peoples, who left records, are studied, with particular emphasis upon the Egyptians, Greeks, and Romans. The tombs, the relics left in the tombs, their potteries and statues, all hold a strange fascination for children of all ages. At the end of a series of lessons these children have a knowledge of, an understanding of, and a feeling for the ancient peoples that a college student might well envy.

Through the use of lantern slides (furnished by the museum), showing pictures and writings on mummy cases and on stones, a social science class studied the growth of communication.

Strange as it may seem, a most successful mathematics project in a junior high class obtained very valuable help. The class traced the growth of the alphabet and numbers, by studying Egyptian hieroglyphics and Babylonian cuneiform writing on clay tablets, the practices of the Greeks and Romans, carrying the study down to the time of the invention of printing — in fact, tracing the whole story of the use made of letters and numbers by people who lived in the various periods of civilization down to modern times. These pupils were impressed with the importance of numbers in all civilization and felt that arithmetic was not just a schoolroom subject.

Our baby classes study the Indians, Japanese, and Chinese people much more intelligently when they have seen the costumes and marveled at the handicraft of these peoples. It makes a quicker and more lasting impression than much reading on the same subject would do.

If a puppet show or costumed dramatization is to be produced, the first thought of both teachers and pupils is the help that they can get through the agency of the Art Museum.

The Natural History Museum has been equally helpful and interesting. The work done under their guidance is of a different kind

entirely. It deals with life itself and the children's relation to it. One small boy was perfectly amazed to discover that he was an animal and a mammal. It took him the entire class period to recover.

No subject is more interesting or more vital to a child than origins and relationships, nor is any information more greedily devoured.

Have you ever been into the country with some impoverished soul, who talked shop and saw nothing — whose very presence was a brazen intrusion and a profanation? We attempt to prevent such a caricature by getting the children into the museums and into the open spaces and placing them on intimate terms with their furred and feathered friends. We are succeeding. No one would doubt that we are if he were to watch the children as they come upon a wood dove on her nest and were to hear their whispered and awed comments; or were to see a wee lad, as I did, pull off his hat unconsciously as he gazed for the first time at an orchid growing deep in the heart of a wooded swamp.

In cosmopolitan groups such as our classes are, the children have had a wide diversity of past experiences. These trips give them a common experience which they can enjoy and share together. It binds them together through their joint sharing in a unit of work which, after all, is applied Americanization.

Some excursions are made as a first step in a unit of work, to open up a field of investigation; others are taken as a desirable step in work being carried on by the children to gain knowledge so that they can proceed with their classroom work. Still others are taken as a culmination of work already done. In all cases the field worker, principal, and teacher coöperate to secure the desired end.

The following are the "objectives" as outlined by the museum authorities:

ART OBJECTIVES OF THE CLEVELAND MUSEUM OF ART

VISITS FOR THE HIGH I.Q. CHILDREN, I, II, III GRADES

(L. M. D.)

I. Acquaintance with actual art objects.
   (*a*) Through an understanding of line and form and their significance.
   (*b*) Appreciation of color harmony, contrasting color and the characteristic color harmonies, and contrasts of various peoples.
   (*c*) Appreciation of design.

II. Building up standards of judgment for:
  (*a*) The appropriate application of color.
  (*b*) The appropriate application of design.
III. Developing a memory for form, color, and design (this being done by actual drawing).

Natural History

Lessons in Natural History are given at the Cleveland Museum of Natural History with the following major objective in perspective:

"To enrich the life of the child with facts and truths of Natural History so that he may have greater power to value and to do."

Facts upon which this objective is based:

1. A child has a natural interest in all things in Natural History and is never free from contacts with such things.
2. A child grows by experiences with things, and such growth is promoted when accompanied by interpretive guidance.
3. A child learns to place proper values upon facts, which tends to minimize prejudices, through first-hand experiences.
4. A child acquires the power to do things through self-expression.

Analysis of Major Objective

To give the child:

1. An acquaintance with things of Natural History.
2. An acquaintance with the broad general principles underlying the various changes that he sees going on about him, such as:
   (*a*) Meaning of time as applied to earth's history.
   (*b*) Significance of change.
   (*c*) Significance of the balance of physical forces.
   (*d*) Significance of the balance of life forces.
   (*e*) Relationship of life to environment.
   (*f*) Importance of good breeding.
3. A feeling of altruism toward others and a humaneness for all living things.
4. An appreciation and love for the beautiful.
5. A companionship with the outdoors.
6. A knowledge of natural resources and man's dependence upon them.

Lesson on Mammals

(Prepared for high I.Q. class at Thomas Jefferson Junior High School)

Objectives:

To give pupils a method of organizing facts learned about mammals.

I. Discussion of the animal world and its divisions.
   1. Vertebrate and invertebrate.

II. Listing of the five classes of vertebrates.
   1. Mammals, birds, reptiles, amphibians, and fish.

III. Discussion of the ways in which mammals are different.
   1. Size.
   2. Covering (hair, fur, bristles, wool, quills, plates, or hairless).
   3. Manner of walking (digitigrade, plantigrade).
   4. Use of tail (propeller, rudder, prehensile).
   5. Feet (number of toes).
   6. Teeth and manner of eating (canine, molars, incisors, tusks, teeth for gnawing).
   7. Claws (retractile, for climbing and fighting) (non-retractile, for digging).
   8. Kind of food eaten.
   9. Aquatic or terrestrial.
   10. Diurnal or nocturnal.

IV. Method of grouping according to likenesses, to make study easier and more systematic.
   1. Primates (mammals with hands): man apes, monkeys, marmosets, lemurs.
   2. Carnivora (flesh eaters): cats, dogs, bears, weasels, and hyenas.
   3. Chiroptera (mammals with wings): bats.
   4. Rodents (mammals with teeth especially adapted for gnawing): rabbits, beavers, rats, mice, squirrels, woodchucks, gophers, muskrats, porcupines, and prairie dogs.
   5. Insectivora (insect eaters): moles and shrews.
   6. Edentata (toothless mammals): anteaters, sloths.
   7. Marsupials (pouched mammals): kangaroos and opossums.
   8. Ungulata (hoofed mammals): cows, deer, horses, sheep, camels, goats, elephants, rhinoceroses, hippopotami, pigs, peccaries, and wild boars.
   9. Monotermata (egg-laying mammals): duckbill.
   10. Pinnipeds (fin-footed mammals): seals, walruses, and sea lions.
   11. Sirenea: sea cows, ormanatus, dugongs.
   12. Cetæ: whales.

We have reached the place where we feel that we need not justify our trips, and yet it might be well to state our objectives and the needs of these children, for the benefit of those who still feel that "a great deal of time is spent out of the schoolroom."

Walt Whitman says that a child has a chameleon-like quality, the disposition to take on the color of his surroundings. The field supervisor is also a home investigator and knows the home environment of all our children. Coming as they do from all types of homes, from the loveliest to the lowliest, the home environment

varies. We have those from American and from foreign homes — Protestants, Catholics, and Jews; those who have all that love and money can provide, and those who have neither love nor the fruits of it. Needless to say, there are many whose home environment is not rich. They lack calm, peace, color, and natural beauty. They need to see more of the outside world, well ordered with its obedience to natural laws. They need to see people working together in harmony. They need contact with a world of light and color. They need contact with the "great open spaces," need to see the sky overhead, to feel the earth beneath their feet, to hear the birds and bees, to taste fruit and nuts.

They lack knowledge of the social forces that so intimately influence their lives; they need contact with institutions that contribute something to their well-being. This is supplied by visits to market houses, post offices, police stations, fire houses, and city halls, all of which contribute to their protection and service. They need, possibly most of all, to appreciate and understand the job of the other fellow who is not a white-collar man. For this purpose we go to the foundries, steel mills, and docks. Here they get close to the actual pulse of the country. No child of this mentality can stand and watch steel products being made without feeling the power and strength of it; nor can he fail to appreciate the toil and the brain that lie behind it. Go with them sometime, if you doubt it, and look at them as they stand watching the pouring of a Bessemer furnace, or as they marvel at the skill of the men in the rolling mills of a wire plant. One small boy who sat beside me on the car coming home from such a trip remarked: "Gosh, I'll never see the light of a steel mill in the sky without feeling the white heat of the iron or hearing the roar of the mill. Just think, man built that machinery, and yet he looks like a dwarf as he stands beside it operating it with a small lever." I leave the decision to you. Had he learned enough to justify a half day away from his books?

The area in which you find real teaching is not the school alone. In a school we have certified teachers, professional teachers, but we must not lose sight of the fact that there are wonderful teachers in every walk of life. In our field work we take our teachers where we find them — from the judge on the bench or the superintendent of mails to the newsy on the corner where we await our car. I hope it is not heresy to teach our children that they can learn from every source, and valuable lessons at that. If they acquire this habit of learning from the world at large as well as from books, we can be

sure that they never will feel that their education is completed; they will become students in the real sense of the word.

Keeping in mind that "habits are the stuff of which behavior consists," a great effort has been made by the field worker to set up the right habits as far as conduct on the trips is concerned. Time is taken to train leaders among the children, who stop at curbs, watch for signals in traffic, etc. New classes are told how other classes conduct their trip, and just what is considered "the thing to do." No unnecessary noise or moving about in street cars, well-modulated voices on all occasions, girls first, hats off in elevators and museums, no gum, are a few of "the things to do." This may sound as though they were a group of sticks when out on an excursion, but nothing is farther from the truth. They sit and play several kinds of guessing games on the cars or chat merrily but quietly. Many street-car conductors and passengers have praised their conduct, and these remarks are always repeated to them. It works miracles.

In a factory, museum, or public institution we have no cases of disinterest; all are wide awake and eager for everything that is said. They learn to ask intelligent questions, and guides often have commented upon their grasp of the material presented and have compared them favorably with high school pupils who have made the same trips.

A few suggestions as to the technique of moving a class on these excursions may be of value. Very definite planning and preparation are necessary, so that all may see the things intended to be seen and to the end that the trip does not conclude in a futile frolic. The teacher and the field worker must recognize all the educational possibilities of a trip, so that every advantage may be taken of the time.

There are few now who do not realize the value of visual education or objective teaching. It is possible to learn almost anything by rote, but real contacts help clarify and impress principles. Impressions gained through several senses are most effective and are a real economy of time. The superiority of vivid reality over symbols cannot be questioned.

We have mentioned the value of appreciation gained through the trips, but we failed to mention the fact that the teacher, guide, or field worker must have a plentiful supply of it. The children are quick to recognize a pose, but are equally quick to respond to the real thing. If one sees reality or feels the inspiration of something, it will be communicated in a simple natural enthusiasm that is

accepted. No one is a carrier of contagion if one really does not have it.

No tests or means of measuring this type of work have been devised. One rather likes to think that there are some things outside the scope of tests or measuring sticks. We hope that they are enriching the child mentally and emotionally and that the knowledge gained, the contacts made, will add to his education, interest, and sympathy, thus making him a better citizen who will be rational at all times and will feel the responsibility of his position regardless of where we may find him in the future years.

List of Trips

1. Plain Dealer
2. Ink Factory
3. Foundry
4. Mazda Lamp
5. Knitting Mills
6. Baldwin Reservoir
7. Docks
8. Lighthouse — Life-saving Station
9. Banks
10. Insurance Company
11. Zoo
12. Aviation Field (United States)
13. Radio Broadcasting Station
14. Post Office
15. Theater
16. Public Library
17. Art Museum
18. Natural History Museum
19. Historical Museum
20. Nature Study Hikes
21. Flour Mill — Bakery
22. Dairy Farm — Dairy — Ice-Cream Factory
23. City Hall — Court House — Federal Building
24. Refrigeration Plant
25. Ice Plant
26. Brick Yards
27. Stock Yards
28. Normal School (To see educational films)
29. Symphony Concerts
30. Silk Mills — Rayon Silk

Further enrichment is accomplished by wider reading. These children quickly master the mechanics of reading and then read for the thought. An abundance of supplementary books is provided, and they read widely — thus laying the foundation for English composition and literary appreciation. In the higher grades of the elementary school and in the junior and senior high schools they read quantities of standard books. Shakespeare is enjoyed by sixth grades in the special classes.

As for writing English, they are continually at it from the earliest grades. A few samples of their work in this line will be found in Part II.

Every room for gifted children is provided with a typewriter. Every child learns typewriting by the touch method. There is no formal instruction; but every child wants to use the typewriter, and he is shown how to use it correctly. Moreover, the typewriter is the greatest promoter of correct spelling, capitalization, punctuation, and paragraphing ever brought into a schoolroom. There is something about the typewritten page that makes the child want to have it just right. He practices until he gets it right. He asks questions until he learns the correct forms. Some day there will be a typewriter in every schoolroom in every school, and it will do for the child's work in English what it has done for business — render easy and efficient what was formerly drudgery of a very unsatisfactory and ineffective sort.

One of the greatest means of enrichment is history. There is, of course, no end of material. Children are intensely interested in history when they can read it as a human story. The trouble with our ordinary teaching of school history has been that we have reduced it to a mass of dates and loosely related events. We have done this in an effort to reduce it to a relatively few pages, so that the school child can cover the history of the world in the prescribed time. These gifted children who have learned to read and who have plenty of time, read the full story with all the interesting details.

Nature study is another subject that can be elaborated as much as is desired.

Art is another. Contrary to popular ideas, children love to express themselves in artistic forms, and their work is usually of marked excellence.

Manual training as commonly understood is not yet highly developed in these classes, but there is evidence that these

children enjoy it and profit by it whenever the opportunity is offered.

While there is not much opportunity for musical expression in these classes, it is noteworthy that a large percentage of the children are taking lessons in music outside of school.

The foregoing are some of the enrichment projects. Some others — such as dramatizing — are referred to incidentally in other chapters.

Who can say what will be the ultimate value of all this extra work carried on for the ten or twelve years of the elementary and high school course? It is easy to see the mass of information that is being acquired; but we must not let that blind us to the vastly more important and valuable acquisition of habits of *thinking*, of studying, of investigating, of judging, of seeing both sides of a question, of stating problems as well as solving them; and finally, the development of habits of self-control and of carrying responsibility. These are the real enrichments.

CHAPTER THIRTEEN

The High I.Q. Class in Junior High School

Those of us who had been watching the work of the first special class to be organized in Cleveland looked forward with great interest to their admission to junior high school. Naturally, it will be many years before it will be possible to demonstrate thoroughly the advantages of this new movement in education. However, it ought to be possible to check up along the way and discover the direction in which we are moving.

Entrance into junior high school — meaning, as it does, new teachers, new conditions, and new opportunities — ought to tell us something. If these children do work consistently inferior to that done by those high school children of equally high I.Q. but who have had the regular grade training, there is only one conclusion to be drawn; namely, that our methods are wrong and therefore continuation of this work — involving, as it does, greater expense — is not worth while.

On the other hand, should the report from high schools be to the effect that these children are distinctly better and more capable, then we should be encouraged to go on with added zeal and continued effort.

Finally, should the report from the high school be uncertain, — that is, fail to indicate that these children are better or worse than the best of high school students, — then the question would be raised as to whether the experiment had gone far enough to be a fair test, or whether it was desirable to continue it over a longer period, with the hope of getting more definite results, one way or the other.

With these possible alternative reports in view, we have naturally watched with keen interest the progress of these special classes in high schools. We now have a mass of

data on the subject which are not easy to analyze. Many more factors of a complicating nature entered into the situation than we had anticipated, and it is difficult to evaluate these different elements. Nevertheless, because of its importance, we shall try to present the situation as fully and carefully as possible.

Before undertaking this evaluation of available facts, it is necessary, in justice to the reader, that we call attention to the fact that the writer is a prejudiced observer. While he might fairly claim that he has considered the problem from all standpoints and has arrived at an unbiased conclusion (as is the usual claim in such cases), he is unwilling to take that position. He believes that in this and similar cases the only fair way is to recognize and frankly admit prejudice, that both writer and the reader may make due allowance therefor.

The reader who has gone through the preceding chapters cannot have failed to discover that the writer is enthusiastic over these special classes for gifted children; that he believes in them, both in theory and in practice; that he regards the movement as an epoch-making one in education; that he regards the work done in these Cleveland classes as near to ideal education as anything that he has ever seen or read about. What the reader probably has *not* discovered and has not known until now, is the writer's personal interests in many of these children. There do exist, however, deep personal interests, for one cannot have visited these classes for five years, even though it was only two days a month, without making many personal contacts; without knowing by sight and by name many of the children; without being charmed by their personalities; without being delighted with their progress and development; and without having a profound belief in the possibilities for their continued success in a new environment. Consequently, he scrutinizes that new environment very critically. He tends to seize upon

everything that furthers his hope and expectation, tends also to accept uncritically every favorable comment that is made, and is inclined to explain away every mistake or failure made by these children and to blame the new environment for any failures that may occur. With this admission, we may proceed.

First, we shall try to enumerate the various factors in the problem as far as we are able to see them, and to anticipate as far as possible what might reasonably be expected to happen in a situation such as we are considering. We shall then recount, as far as our data permit, what *has* happened, and, finally, see if we can draw any reasonable conclusions.

Ten groups made up of children who had spent from two to four years in special classes for gifted children have, to date, entered three different junior high schools. Approximately the same number of groups of children who had spent six years in the grades in regular classes, with no special considerations, were selected because of their high I.Q.'s and mingled with the groups of gifted children who had received special class training. This was done so as to make a high school unit of gifted children large enough to be handled in classes more or less by themselves. We say more or less, because in one of the three high schools to which some of these ten groups have gone, the high I.Q. classes have taken the entire time of a group of teachers who, with minor exceptions, have had no other classes. In the other two high schools, these high I.Q. classes have taken only part of the time of their teachers, the rest of the teachers' time being devoted to the regular classes of the high school. This mixed character of the high school gifted classes must be noticed because any criticism or praise of these classes can be only partially due to that group which has enjoyed the special method used in the elementary schools.

The difficulty of estimating the effects of the two groups

(which were included in these special high school classes) upon each other is obvious. It is clear, however, that any unfavorable criticism that may be lodged against the children who came from the special elementary classes may arise as a result of the fact that these children were suddenly thrown into classes along with pupils who had never before been in a special class. The regular elementary school group would naturally have ideas and opinions about the classes for gifted children different from those held by the elementary special class group. Whether these ideas and opinions would help or hinder the work is not definitely known. It is clear, however, that the existence in the same class of two groups having had different types of previous training would encourage the development of certain attitudes toward each other by the two groups. Again, we must admit that we do not know whether these attitudes would be a help or a hindrance. We simply know that the situation was one which, by its very nature, might operate detrimentally.

Another element in the situation that is by no means to be ignored is the fact that most of these groups represented a new idea in the high school to which they went. It is a well-known psychological fact that the mind does not take kindly to new ideas. It is, to state the case frankly, a universal human tendency to criticize any new movement. The severity of the criticism depends quite largely upon the degree of novelty in the case. That is to say, a procedure that is *entirely* new, and is sprung upon us suddenly, is likely to be received with great disfavor; while a procedure of which we have heard, or which is only slightly different from one with which we are familiar, may be received with only mild suspicion and slight criticism and may, if it can justify itself, be fairly easily accepted. For many reasons, special classes for gifted children come pretty thoroughly within the first group. We have already seen, in our dis-

cussion of the objections raised, that there is a tendency in some quarters to see serious objections and even to use arguments which have no basis in facts. Such classes are, in the very nature of the case, bound to arouse serious jealousy. This is true because special high I.Q. classes represent not only a new idea, but also make possible the development of attitudes of superiority and inferiority. There is probably nothing which arouses unpleasant feeling quicker in the average man than for some one to say, "I am better than thou!" While the children in these classes have made no such statements, teachers have made them, and the result is practically the same.

The next consideration is closely related to the foregoing. Another trait that is well denominated a universal human tendency is the inclination toward establishment of a hierarchy of human classes. The caste system, as it exists in many of the older nations, is no accident; and although the American nation is claimed to be founded on the basis of equality, nevertheless the evolution of classes is as clear and definite as it is inevitable. Moreover, it pervades the educational system as well as the social. The following humorous bit portrays it in a way that will be recognized by every one.

A Human Tendency

The College President:
Such rawness in a student is a shame;
But lack of preparation is to blame.
The High School Principal:
Good heavens! what crudity! The boy's a fool;
The fault, of course, is with the grammar school.
The Grammar Principal:
Would that from such a dunce I might be spared!
They send them up to me so unprepared.
The Primary Teacher:
Poor kindergarten blockhead! And they call
That "preparation"! Worse than none at all.

The Kindergarten Teacher:
Never such lack of training did I see!
What sort of person can the mother be?
The Mother:
You stupid child! But then, you're not to blame,
Your father's family are all the same.
The Philosopher:
Shall father in his folks' defense be heard?
No! Let the mother have the final word.

In other words, each institution is jealous of its position — and rightly so. Every teacher wants her children promoted to the next grade, and were *she* to set the standard, it would inevitably become lower and lower as the years went by. Consequently, the next class above must continually reiterate its standards. The result is a constant struggle, sometimes leading to animosities but on the whole having a good effect in keeping the entire system alert.

It is but natural, then, that the high school should look somewhat critically upon this new group that is coming to them labeled "gifted children." But even a critical attitude in no way justifies the remark reported from one teacher, who said to one of these children, "So you are a gifted child, are you? Well, we will see about that." It is entirely justifiable for high schools to consider critically the work that is being done by the schools below them. Moreover, it is entirely possible that the special elementary class teachers, in their enthusiasm for the work of these children, for their uniform good behavior, their willingness, their earnestness, may have forgotten some items essential for high school pupils to have. Such a condition might also be due to the newness of the problem.

In making the transition from elementary grades to junior high school there may be a difficulty inherent in the present practice of having the same teacher follow the group through

as many as three grades. It is always difficult for a parent to realize that the child is growing up. Likewise it may be difficult for the teacher to realize the changes that are silently going on in this human organism — that the child who, in the first grade, needs care and nurture, should be given some responsibility in the third; and the child who needs help in the fourth should be able largely to take care of himself in the sixth grade. Whereas, in the first grade, the work must be made easy and pleasant, in the sixth grade and the high school the pupil should have developed the power to do difficult and strenuous work. It may be that as the work becomes established it will prove desirable to give the children a new teacher each succeeding year, as is done in the regular grades.

Next to be considered is a situation that every student is obliged to face when he goes from the elementary grades into the high school; namely, everything is new. The building is new to him; teachers are new, his associates are new. In other words, he is thrust into a completely new environment. Now this appears to be the same for all children and theoretically should be no harder for the gifted child than for the others, but in one respect it is different. Unlike the other children, the gifted child has been in the same room and with the same teacher for from two to three years. Consequently, this move is for him like going away from home. Any one who has ever experienced it knows that homesickness makes one abnormal for the time being.

Finally, we may mention the fact that there is a greater difference for him than for the other children in the methods to which he has to conform. He has a sense of freedom, a reliance upon his own judgment, and a feeling of responsibility which is still largely foreign to the high school. Because of the larger numbers and more mature character of the children, it has seemed necessary to have more rules and

regulations in the high schools than are necessary even in the regular grades, and vastly more than are used in these classes for the gifted children.

The foregoing will indicate some of the unknown quantities in our problem.

We shall now turn our attention to the actual situation as it has developed. The first group to enter the junior high from the special class in the elementary school consisted of fifteen children who had been in special class with one teacher for two years. To bring the number up nearly to the required thirty-five, nineteen of the brightest of the other children who were entering at the same time were picked out and put with the fifteen to make the high school gifted class. This group was put together in a "home room," under the direction of a "home room teacher." Their work was mostly new, some of it completely so; for example, they were taught Latin, which they had never studied before. All that happened in those early days, I do not know. A visit of once a month is not enough to get a complete understanding when the situation is critical.

When I made my first visit, — which was, perhaps, after the class had been in operation for a month, — the gifted class had already become the most serious problem of the school. Only one teacher out of six had a good word for them. She found them an extremely interesting and worthwhile group, but to the other teachers they were highly unsatisfactory.

At this point evaluation of this first problem is complicated by the fact previously stated, that we had two groups — the fifteen who had come from the special class in the elementary school and the nineteen who had never been in a special class. It might be thought that this combination was somehow responsible for the maladjustment. However, since the other junior high school groups have been made up

in the same way and no such dissatisfaction has been met, it does not seem likely that this is the explanation.

It seems rather to be an illustration of the universal ignorance of the nature of genius and its problems. The following query referring to this group seems to show just how little these gifted children were understood:

"But what is to be done with that small minority which scoffs at laws of their own student council, and absolutely refuses either to obey the laws or to contribute to their class work?"

The troublesome matter referred to in this query is a real problem, but is not one limited to gifted children or necessarily an outgrowth of their method of training. It is true we rather naturally expect gifted children to be superior to these difficulties, but that is because we have given too little study to gifted children and do not understand their problems or how to solve them. It is even possible that we must expect more difficulties of that kind among gifted children than among ordinary children, because their minds have developed faster than their physical organisms and their social adjustment. This is all a further illustration of what we have continually repeated, that the gifted child is a new problem and his education requires new methods. It must not be forgotten that the gifted child gets into the junior high school when he is 11 or 12 years of age, with a mind equivalent to that of a child 14 or 15 years of age. Consequently, he gets ideas far beyond his age. Ideas are strange things and exert a strange power over us. How many of us have not found ourselves behaving at times in strange ways for which, perhaps, we could not account? If we did succeed in analyzing the situation, we realized that we were impelled by an idea which we had obtained we knew not how. We must always expect these problem cases.

Moreover, it is quite likely that these traits of contrary-

One of the latest gifted classes to enter junior high school. This is a typical scene. Note the dog, cat, bird, fish, and parrot.

mindedness are more or less characteristic of the pre-adolescent and adolescent periods. Because a child has a brilliant mind is no assurance that he may not have emotional disturbances. The important thing to remember is that what a child of this age needs is not so much discipline as a sympathetic and understanding teacher.

Professor James discusses at some length what he calls the "balky will," a purely unaccountable state of mind, but a state into which a child is thrown by nothing more serious, perhaps, than a sudden question. Such children cannot answer and are judged either ignorant or insolent by any teacher who is unfamiliar with such cases.

This first group of children which got off with such a bad start in junior high school is now in the senior high school in the same building — except nine who have transferred to other schools. Those who have remained seem to have overcome their difficulties, and the principal reports: "They are outstanding in the school in general information and in scholarship; almost all of them are on the honor and merit rolls; and they are superior in ability and in willingness to lead in school activities."

That is a strong confirmation of the theory underlying special classes. The conclusion which seems warranted from all this is that this class was unfortunate in that they were the *first gifted class to enter the junior high school*, and that their coming was anticipated by teachers who had unfortunate misconceptions about them. The alternative conclusion would be, that because of the nature of gifted children or the character of their elementary school training, there is inevitably a serious period of maladjustment upon their induction into high school. We do not consider this last to be true, because the experiences which we are about to relate of other classes in other high schools seem entirely to negative this possibility.

The next year four more groups entered a junior high school. Somewhat troubled by the period of maladjustment of this first group, another plan was tried with this new class. Enough new children were added to make a complete unit sufficient to take the entire time of a group of teachers. These teachers were specially chosen for this work. The result has been entirely different. This group is now finishing the third year in the junior high school. It is not too much to say that they have been a continual satisfaction to their teachers and to the principal. The children have been supremely happy.[1] This does not mean that there have not been problems. All thoughtful people know that no success is ever attained without constant effort. There have been problems with individual children, similar to some of those that occurred in connection with the other group, but careful attention and good judgment have solved these problems quite satisfactorily.

The third high school received two classes in the autumn of 1926 and a third class in the following February. In this case the plan of procedure was similar to that in the first high school. That is to say, other children were put with them and they were given to the regular teachers in the school. But here the misunderstandings did not exist, and there has been perfect harmony and happiness from the start. There have been no complaints that they were not prepared, or that they were superficial or unwilling to work. On the contrary, they have been highly praised by their teachers and principal. We are reproducing, in Part II, a few of their exercises in English, which will give some idea of their ability.

The conclusions to be drawn from the experience of these

[1] Later Note. This group is now (1928) in senior high school and in the opinion of the principal fully justifies the expectations of the most ardent enthusiasts for special classes for gifted children.

ten classes in these three junior high schools seem to be clear. As usual, beginnings are difficult, and when a class of high I.Q. children first enters the high school, great care should be taken, first, that they are received with the right attitude; second, that there exist no misconceptions or preconceived ideas; third, that the teachers understand children as well as the subjects they teach; and that everything be done to make the way as smooth as possible.

It is clear from the experience of nine out of the ten classes that have entered junior high school that there need be no period of maladjustment; and further, the evidence is now clear that the training in the elementary schools has been satisfactory and beneficial. Indeed, there are many evidences that those who have had the special-class methods in the elementary grades have a decided advantage over those who come into the special class for the first time in the junior high school. The freedom found in these elementary special classes has developed a degree of responsibility, self-control, and interest in work that quickly shows results in high school.

CHAPTER FOURTEEN

For Parents

It is not impossible that this book may occasionally fall into the hands of the parents of a child who is a member of a special class for bright children. Such parents may want to know what their relation is to this work. Such questions arise as, What should be the home treatment of the bright child? What can the parents do to help the child to achieve his greatest possibility? What can they do to make the work of the teacher more effective? There are some things that may properly be said on these topics.

In discussing the methods of selecting children for these classes, we have stated that the child's home environment, the character of his parents, should be taken into account in considering the advisability of placing any particular child in a special class. As a rule, it is true that gifted children have intelligent parents. There are some exceptions, of course, but of the many parents of these children whom I have met, practically all have shown more than average ability. Mostly they have been persons of rather unusual common sense. Of all the children in these classes, we have not had trouble with the parents except in one or two cases. In one case the father made so much trouble by his absurd demands and requests that the child became unsettled in his work and had to be transferred to the regular grade. In another case a mother was apparently so elated that her little daughter was in a class for gifted children that she could talk about nothing else, to the child, to the teachers, and presumably to the neighbors. The result was that it was difficult to keep the child's mind on her work, to interest her in normal living. However, it was accomplished by some extra effort and care on the part of the teacher, and the child got along very well. That case leads me to my first topic.

We have often said that we do things by extremes, whereas a middle ground is usually the wisest. There are two extremes in the handling of children, that are unfortunately very common. We have already pointed out that some people are afraid of these classes for bright children, claiming to fear that the result will be to make "conceited little prigs." The reply has sometimes been made to that objection that it is not the school or the class that makes the prig, but the parent. That is, indeed, one of the extremes. Some parents are always telling their children how wonderfully brilliant they are, or, what is much worse, they are continually telling other people, in the presence of the child, how brilliant the child is. I said, this telling of others in the presence of the child is much worse. Therein is involved a principle with which many people are unfamiliar. It has been called "indirect suggestion," and, while damaging in the instance mentioned, when rightly used is of tremendous value in the training of children.

Professor James says, "Do not preach too much to your pupils or abound in good talk in the abstract." "Preaching" and "good talk" are direct suggestions and every one, including the child, is suspicious. We may use direct suggestion and tell a child to be honest, or that he is honest, and he takes little account of it. If he overhears us tell some one else that he is honest, it makes a great impression. It seems as though he reasons that when we tell it to him we have some purpose, some "ax to grind," but if we tell it to a neighbor, if it is of sufficient importance to be told to a stranger, it must be true.

To come back from our digression, the opposite extreme to telling a child that he is good or that he is brilliant or highly intelligent, — which is not always wrong, indeed is often decidedly right, — is the really vicious practice of telling him that he is stupid, dull, or bad. These are the two extremes

to which reference was made above. Moreover, one cannot say that the truth lies in the middle, or even that the extremes should never be resorted to in dealing with children. It is true that a child should never be told that he is bad or that he is stupid. If he is stupid, it is unkind and does no good to tell him so. In fact, it does much harm, because it only acts to discourage him.

A child may, under rare circumstances, be told that he is brilliant. He may need just that encouragement. He may need to be reminded of the responsibility that goes with his good intelligence. On the other hand, there are children to whom such comment would be detrimental because they are inclined to exaggerate its significance. Some will be inclined to rely on their supposed ability to carry them along without effort. In the case of others, it sometimes gives them an abnormal feeling of superiority, which makes them intolerant of their fellows. This, of course, makes them objectionable. Everybody despises a conceited man, but that is not the worst of it. Such an attitude on the part of the child oftentimes completely unfits him for social life. He develops a spirit and disposition whereby he cannot coöperate with any one else, and that is fatal to his greatest usefulness. Because of this latter tendency, it is but natural to raise the question of whether the selecting of these children, taking them from the regular grades, putting them into a class by themselves and labeling them "gifted children," is not a dangerous procedure, so far as the child's character and disposition are concerned. This is a matter that should be watched. It can easily be controlled if any such tendency is discovered. It is only necessary to emphasize the fact that responsibility goes with high ability. If the child claims great ability, he should be reminded that great achievements are expected of him, because of his ability.

Parents of a bright child are frequently tempted to work

him too hard. They complain because the teacher does not assign more home work. It is the consensus of opinion among educators at the present time that such crowding is highly undesirable. This is especially true wherever, as in these special classes, the children are so handled that the problems become their own. In dealing with their own problems, such children are inclined to work incessantly because of their interest. In such a case, the child should be left to judge for himself when he has worked enough. Sometimes he needs to be held back rather than pushed forward. In case of doubt in such matters, it is always desirable that the parents should consult the teacher and learn all the possible facts before taking any steps leading to a different procedure.

One source of misunderstanding which sometimes comes to the front is the character of the work done in school. Sometimes parents or grandparents who, like the writer, were brought up on the old-fashioned system of the three R's, the recitation, memorizing of state capitals, geography questions, etc., think that the modern project methods are a waste of time; and they are inclined to find fault with the school that goes too far in that direction. For example, a certain class decided that they wanted to have a circus. Accordingly, everything else was put aside, and they devoted themselves for some time — let us say, for the sake of argument, that it may have been as much as a week — to the preparation and planning of a circus. It was the kind of thing that in the old days we should have done on Saturdays — but with this difference, we should have done it without any guidance or suggestion from any one. Now to give up a week of school days to that sort of thing seems to many to be a waste of time. As a matter of fact, nothing that has ever happened in our educational system is more to be commended than this method of *doing* things instead of reading about other people

doing them, *making* things instead of seeing pictures of them. What these children learned while planning their circus cannot be measured. Those who are inclined to criticize such activities as these should remember that planning and making their costumes, making the apparatus and devices, the handling of real things, working out practical problems, and getting real experience, such as these children did, is real education. Besides, their reading, writing, and arithmetic all are given practice in connection with these bits of real life.

On the matter of coöperation, much might be written, but there is not much that is specific for the gifted child. In other words, most of what comes to mind under this head would be more appropriate for a book on how to bring up children than for a chapter on the peculiar handling of gifted children. Such a thing should be considered, for example, as the explosion of the old doctrine that children should be seen and not heard. This applies to all children as well as to gifted children. We now know that the child learns much which aids facility of expression by being allowed to contribute his thought to the general conversation. His contributions should, of course, occur under right conditions and with limitations. It is as absurd for him to monopolize the conversation as it is for him never to be allowed to speak.

There is one other thing that properly comes in here. That is the matter of responsibility. It is being urged more than ever that the children should be given all the responsibility that they can safely carry, that the method of doing everything for them, of never trusting them to do anything of importance, is a failure to educate and train them for responsibilities of later life. The importance of considering this in the case of gifted children comes from the fact that because of their superior intelligence, they can be given larger responsibilities than is possible with the average child. Or, to put it in another way, where one might hesitate to place a certain

responsibility upon the average child, he can feel quite free in giving the same responsibility to a child of high intelligence because of his intelligence.

We may give an illustration and at the same time call attention to an extremely important topic. There is perhaps no subject of greater importance than the handling of money, or any phase of education where training in responsibility is more needed. More children start the habit of stealing and even forgery as a direct result of never having been allowed to handle money and know its value, than from any other cause. It may be thought that this has nothing to do with gifted children. Unfortunately it is as easy to make criminals out of gifted children as out of morons — if they are not rightly trained. Moreover, forgery is a trick of the bright boy, not of the dull boy. He needs money, and his keen mind tells him that it is easy to sign his father's or an acquaintance's name to a check. As he has never been given responsibility in money matters, he has not the slightest notion of the seriousness of his act or of the resultant consequences.

To prevent such a crime the child should early earn his own money, or at least some of it. He should spend his own money, even to the extent of making bad bargains, buying articles of inferior quality, and, in short, learning in small ways the many lessons that he will need in order to be honest and to manage with good judgment whatever wealth he may sometime have. Besides buying his own clothing — with dad's money and with dad's advice, wisely and not too freely given — he should be given the responsibility of handling money for others in larger and larger amounts as he grows up. With it all, he should be taught the methods used in business and why it is a crime to forge a check. The development of a sense of responsibility in money matters will go far toward keeping a boy to the practice of right habits.

CHAPTER FIFTEEN

The I.Q. and Temperament

This topic is a dangerous one, for it might easily lead us into wild speculation and philosophic discussion, unfounded theories and profitless debate. We shall, however, attempt to confine ourselves principally to the citing of a few facts that should be considered in connection with our problem.

It has always been recognized that intelligence is only one of the factors upon which human behavior depends, although intelligence appears to be fundamental in the sense that the absence of a fairly good degree of it is a serious handicap, resulting in a loss of power for achievement. Yet the possession of the highest degree of it does not insure perfect success. There are times when other factors enter into the situation to such an extent as to produce serious disharmony. Miss Anna Gillingham has described twenty-five cases of exceptionally bright children who have been utterly incapable of using their intelligence to help themselves to adjust to their environment. Genius is proverbially eccentric and hard to get along with. If a genius is producing something that the world wants, we put up with him and attempt to adjust ourselves to him, instead of requiring him to adjust to us. How far this process should be carried is still a question which no one can answer.

We talk much about initiative, originality, independence. Yet we find it exceedingly difficult to tolerate these traits in children when they mean inconvenience to us or a violation of the usual norms of conduct. But, says some one, must we not draw the line somewhere? It is very difficult to reply, "No line should be drawn." If we knew surely that "genius must have its fling," we should better know how to answer this question. We do not know, and whenever genius has shown unusual conduct or indulged in excesses, we

never know whether the man was great because of his eccentricities or in spite of them. One man claims that Edgar Allan Poe could never have written the wonderful things that he did, had he not been addicted to his cups. Another one says, "Oh, what marvelous poetry he would have written if he had kept a clear brain, uncontaminated by the poison."

In giving these children special opportunities and special freedom to develop their minds as much and as far as possible, we must not forget that we want to give them something more than a large stock of information. We must develop power. We say we want good citizenship. Good citizenship means self-control in the interests of the entire group. Self-control, again, means not letting oneself out, but constantly curbing and curtailing. Is that what we want? It may be that in exercising the self-control that we demand, the child as well as the man is giving up his originality and his initiative.

All the studies so far seem to indicate that, while the high I.Q. is not the only essential to great achievement, yet a reasonably high I.Q. is *one* of the essential factors. That is to say, there is a limit below which no amount of good will, good temperament, or good character can entirely make up for lack of intelligence. That being the case, it would seem to be all the more incumbent upon educators to make every conceivable effort to save every child with high I.Q. by developing as far as possible the other qualities that are desirable.

In this connection, a consideration of some of the individual children with supposed high intelligence, who have been so thoroughly advertised in recent years, might be illuminating, such as William James Sidis, Winifred Stoner, and Elizabeth Benson. In such cases the parents have generally claimed that the results were due to careful and exceptionally good training, rather than to inherited ability. At least, Dr.

Sidis was emphatic in regard to that in connection with his boy; and Mrs. Stoner makes the same claims for Winifred.

It is the same old problem. Is it nature or is it nurture? A study of these cases seems to corroborate the conclusion that it is both, as already stated. William James Sidis' specialty was mathematics. He was admitted to Harvard University as a special student upon the plea that he had a mathematical mind and needed the stimulation and encouragement of men who were versed in higher mathematics. He could not enter regularly because he could not pass all the required examinations. Hence, if it is a matter of nurture, as Dr. Sidis claimed, one cannot refrain from asking, "Why was he not trained, somewhat at least, in those things that are involved in the necessity of making one's way in modern civilization?" Young Sidis has never achieved. If, contrary to his father's claim, this was a case of inheritance of peculiar ability in mathematics, with corresponding lack of ability in other lines, then his career would be explained. But we still need to know, as in all such cases, just what was the character of the training and how far it was impossible for careful training to "even up" the personality, at least enough to make this *mathematical genius* of practical value to himself and the world. For even Sidis's mathematics has never contributed anything to his own satisfaction or to the advancement of the science.

That at least some bright children have achieved is shown by the second volume of Terman's "Genetic Studies of Genius," written by Dr. Catharine Cox, on *The Early Mental Traits of Three Hundred Geniuses.* Here Dr. Cox shows that these men, past and present, who have achieved great things worth designating as genius, had high native intelligence, which early showed itself and doubtless was the reason for the encouragement and careful training and education which they received. No better argument for the special

training of bright children in the schools is needed, than the histories of these men. It is believed that the great service which can be rendered by selecting these children and giving them special opportunities will save for civilization a much larger proportion of these talented people than has ever been done when it was left to chance. The simple fact that Dr. Cox is able to pick out from all history only three hundred of these remarkable people must surely indicate that only an insignificant proportion of the high-intelligenced have ever had a chance to achieve. It is believed that with better methods and with special attention being given to the problem, an effort to give every gifted child an adequate educational opportunity will most decidedly benefit humanity and civilization.

PART TWO

THE CHILDREN AND THEIR WORK

SECTION A

The Children and the Parents

Facts about the children in Cleveland high I.Q. classes of the elementary grades

These children range in chronological age from five years two months to fourteen years one month; and in mental age from six years eight months to eighteen years seven months. The distribution is as follows:

Chronological Age	No. Cases	Mental Age	No. Cases
5	8	6	2
6	10	7	5
7	21	8	15
8	27	9	13
9	39	10	26
10	43	11	19
11	58	12	30
12	27	13	32
13	3	14	37
14	1	15	25
		16	18
		17	17
		18	5

There are 117 girls and 127 boys.

The position in the family was as follows:

The first born number	126	Sixth born number	6
Second born number	74	Seventh born number	1
Third born number	19	Ninth born number	1
Fourth born number	20	Twelfth born number	1
Fifth born number	2	Unknown number	3

Of the first born, 45 were the only children.

We have the following nationalities represented, both parents the same:

American	121	Scotch	4
German	2	English	3
Jewish	45	Danish	1
Slavic	1	Italian	1
Polish	3	Bohemian	2
Roumanian	3	Finnish	1
Russian	5	Croatian	1
Swiss	1	Swedish	2
Hungarian	3	Negro	3

In the following we have mixed parentage, the father being given first.

Irish-American	1	Scotch-English	1
Irish-Welsh	1	German-Bohemian	1
English-American	4	German-American	3
English-German	1	German-French	1
English-Scotch	1	Russian-German	2
English-Russian	1	Russian-American	1
Welsh-Scotch	1	American-Welsh	1
Welsh-American	1	American-French Canadian	1
Hungarian-Austrian	1	American-Swiss	1
French-Canadian	1	American-French	1
Swedish-Armenian	1	American-German	1
Scotch-German	1	American-English	1
Scotch-American	1	Bohemian-American	1

If we add to the 121 where both parents are American, the 19 families where *one* parent is American, we have a total of 140 cases.

The I.Q.'s of the group are distributed as follows:

I.Q.	No. Cases	I.Q.	No. Cases	I.Q.	No. Cases	I.Q.	No. Cases	I.Q.	No. Cases
108	1	125	12	133	6	141	3	150	2
115	1	126	13	134	8	142	4	152	1
117	2	127	12	135	10	143	1	153	1
119	5	128	7	136	8	144	3	155	1
120	20	129	7	137	8	145	3	157	1
121	12	130	7	138	4	146	4	163	1
122	11	131	7	139	4	147	2	165	2
123	15	132	10	140	5	149	2	172	1
124	15								

DISTRIBUTION OF OCCUPATIONS AMONG THE PARENTS OF 235 GIFTED CHILDREN

Accountant	6	Governess	1
Actor	1	Grocer	2
Architect	2		
Artist	2	Hardware	1
Attorney	7	Huckster	1
Automobile dealer	2		
Auditor	1	Insurance agent	3
		Interior decorator	1
Baker	2		
Barber	1	Jeweler	1
Beauty shop	2		
Bookseller	1	Laborer	1
Broker	1	Lake captain	2
Building contractor	3	Lumberman	2
Building supplies	1	Lithographer	2
Business agent	1		
Butcher	3	Machinist	3
Butler	1	Machine builder	1
		Mail clerk	3
Carpenter	4	Managerial positions:	
Cashier	1	Credit manager	1
Chemist	4	Director auto club	1
Clerk	8	Captain fire department	1
Controller	1	Manager	1
		Assistant manager	2
Dancer	1	President of company	1
Dentist	4	Vice president	1
Doctor	1	Police sergeant	1
Draftsman	4	Purchasing agent	2
Dressmaker	2	Sales manager	1
Druggist	3	Superintendent	1
		Traffic manager R. R.	1
Editor	3	Manufacturer	5
Electrician	1	Marble worker	1
Engine assembler	2	Mason	2
Engineer, Civil	4	Mechanic	8
Electrical	4	Merchant	16
Mechanical	1	Metal polisher	4
Stationary	1	Mill owner	1
Locomotive	1	Mill worker	4
		Minister	1
Farmer	1	Motorman	1
Fireman	1	Molder	3

Musician	3	Salesman	15
Music teacher	2	Sheet-metal worker	2
Music-store owner	1	Standard Oil employee	1
Nurse	2	Stenographer	2
Owner of store	3	Switchman	1
Painter	1	Steel works assistant superintendent	1
Paper hanger	1	Tailor	5
Pipe fitter	1	Tailoress	1
Plumbing and heating	1	Teacher	15
Policeman	1	Teacher, College	2
Portrait painter	1	Toolmaker	3
Postal clerk	1	Truck driver	2
Printer	3	Undertaker	1
Publicity man	1	Wagon maker	1
Railroad clerk	2	Watchman	1
Railroad conductor	1	Welfare worker	1
Real estate	7	Wholesaler	1
Restaurant keeper	2	Total	263
Rubber-stamp maker	1		

Of the foregoing 263 parents in the listed occupations, 28 were cases where both father and mother were listed as having an occupation.

If the foregoing occupations are grouped into professional, commercial, industrial, and public service, the following comparison with Terman's findings appears:

Group	Terman	Cleveland
Professional	29.1%	21%
Commercial	46.2%	37%
Industrial	20.2%	39%
Public service	4.5%	3%

The difference shown is probably due to the influence of the private school. In Cleveland and other Eastern cities the children of professional people and many of the commercial group attend private schools, hence are not found in the public school gifted classes. Or it may be due to one or both

of the following facts: many people from the first two groups now live on the Heights, a locality not included in the city of Cleveland. Finally, until the number of special classes becomes adequate, there is bound to be some "selection."

AGE OF PARENTS AT BIRTH OF GIFTED CHILDREN

Whether the age of the parents at the birth of the child has any significance has long been a mooted question. We have the data on 236 fathers and 229 mothers.

The accompanying table gives the results. It is read as follows: Of the entire group, there was one child born when the father was 61 years old.

In the case of the mothers, we have compared our figures with Terman's gifted children and with the statistics of the general population as given by Bailey. So far as they go, the results do not seem to indicate any significance for age.

Father		Mother	
AGE	NO. CHILDREN	AGE	NO. CHILDREN
61	1	47	1
51	3	45	1
48	1	42	1
46	3	40	3
44	2	39	1
43	3	38	8
42	2	37	2
41	3	36	6
40	7	35	5
39	5	34	3
38	8	33	5
37	9	32	12
36	7	31	11
35	8	30	18

Father		Mother	
AGE	NO. CHILDREN	AGE	NO. CHILDREN
34	10	29	16
33	11	28	23
32	12	27	15
31	15	26	11
30	17	25	19
29	18	24	17
28	17	23	13
27	10	22	10
26	14	21	9
25	14	20	8
24	11	19	5
23	6	18	5
22	10	17	1
21	4	16	0
20	4	Total	229
19	0		
18	1		
17	0		
Total	236		

Comparison of Our Results with Terman's and with Bailey's

Mother				
AGES	CASES	OURS	TERMAN'S GIFTED	BAILEY'S GENERAL POPULATION
15–19	11	5%	2.6%	3.64%
20–24	57	25.	22.5	22.20
25–29	84	37.	34.2	29.72
30–34	49	22.	24.5	22.82
35–39	22	10.	10.5	15.42
40–44	4	2.	4.1	5.46
45–49	2	1.	0	.63
Total	229			

HOMES AND PARENTS OF GIFTED CHILDREN

The following one- or two-line comments by the home visitor give an idea of the variations in the homes and families.

Paternal grandfather well educated in German.
Brother gifted in art.
Maternal sister a college woman.
Father and mother both teachers.
Paternal uncles singers. Paternal cousins scholars in Germany.
Maternal family well educated.
Paternal aunt an M.D. and lecturer. Several cousins almost F.M.
Five maternal aunts are teachers. Paternal uncles are ministers.
Father has remarkable memory.
Lovely home; delightful mother.
Maternal side very musical.
Paternal people musical. Mother brilliant.
Maternal uncle sings with Metropolitan Opera. All folks taught music and sang in concert.
Maternal aunt is a designer.
Maternal great-grandfather descendant of William Penn.
Maternal family of élite of Prague.
Father, self-educated; mother, musical.
Paternal uncle teacher of mechanical drawing.
Mother, ordinary and crude.
Paternal grandfather spoke seven languages.
Father is a regular "Sunny Jim."
Maternal grandmother, strong literary ability.
Father is college man.
Father periodic drinker.
Maternal people professional.
Fine parents.
Father deserted family.
Both families musical.

Maternal aunt and uncle are artists.

A fine American-foreign family.

Maternal people all musical.

Maternal family professional and good students.

Home conditions ideal: musical, studious, refined.

Sturdy Scotch qualities prominent in home.

Paternal aunts are singers.

Good family.

Both families { Men — mechanics. / Women — needleworkers.

Maternal family { College men. / Women, graduates of musical schools.

Maternal women very musical.

Father a graduate of Case School of Applied Science. Mother singer.

Families with high ideals.

Rare family culture.

Maternal grandfather invented air brakes.

Fine family.

Splendid type of Italian home.

Five maternal aunts teachers. Paternal uncles ministers.

Very ordinary foreign home.

Good home, child well trained.

Maternal brothers railroad officials.

Paternal people very bright. Maternal people ordinary.

Parents artistic, but no chance to develop it.

Good Southern family.

Very intelligent mother.

Girl sews beautifully.

Father plays in band.

Has very delicate health.

Mother good musician.

Wonderful cultural and educational background.

Paternal grandmother bright and modern.

High-class American home.
Very ordinary background.
Maternal brother very musical.
Maternal family musical.
People with plenty common sense.
Maternal family all musical.
Both families college people.
Paternal men farmers, maternal women dressmakers.
Paternal family all educated.
Paternal uncle an artist.
Both families musical and little else.
Nice family, but boastful.
Wealthy home, conceited family.
Parents both authors.
Parents cultured.
Father, brute; mother, delicate, insane.
Mother artistic.
Mother very ambitious.
Home library of 1000 volumes.
Father artistic, ordinary background.
Maternal family musical.
Mother head of Hospital Board.
Paternal family very musical.
Average home.
Mother chemical degree from Univ. Geneva. Both families brilliant.
Very ordinary home.
Paternal uncles all doctors; maternal uncles and aunts teachers.
Maternal people musical, men mechanical.
Average home.
Ordinary Jewish family.
Both families are college folks.
Paternal family all musicians, splendid type of home.
Very ordinary Jewish family.
Mother well informed, bright.

Paternal family business; maternal family musical.

Mother very bright and sensible; wonderful Jewish family.

Average American home.

Paternal people keen minds and musical; father writes magazine articles on social ethics.

Child has wonderful library; maternal people musical.

Both families musicians and artists.

Both families musicians and love art.

Remarkable home, every member a student.

Father worldly; mother studied law.

Child rather artistic.

Maternal uncle artist and composer of popular music.

Maternal aunt sang in German court; mother musical.

Parents both college folks.

Child very thorough.

Average home.

Average home.

Superior home.

Child fond of music.

Very reticent.

Maternal brother and sister college people; paternal family missionaries.

Father musical.

Child clever in manual arts. Very conscientious.

Child interested in mechanics.

Paternal men politicians. Maternal aunts teachers.

Father bright.

Child interested in art.

A superior home with a real boy.

Boy interested in mathematics.

Boy interested in history.

Ordinary home.

Boy a problem physically and mentally.

Both parents college people.

Father very musical.
Child has fine disposition.
Many teachers in both families; father decided problem in school.
Child gifted in music.
Maternal men politicians. Paternal aunt a teacher.
Mother speaks 7 languages.
Maternal family teachers and preachers.
Splendid American home.
Very high type foreign family.
Parents very superior people.
Musical background in both families.
Paternal family laboring people. Maternal family musical.
Paternal family mostly H. S. graduates, mother attending night school to keep ahead of her children.
Paternal men college graduates.
Child colorless, helpless.
Child affectionate, serious in work.
Boy lacks originality.
Boy immature, lazy.
Boy with great imagination.
Mother social butterfly; no time for her children.
Boy of dreamer type.
Child with charming personality.
Boy likes to argue.
Orphan worth a million, but has no idea of his wealth.
Brilliant Jewish family.
Maternal grandfather concert singer.
Maternal family singers.
Child been in America 3 years but speaks beautiful English.
Child musically inclined.
Child a natural leader.
Splendid Negro family.
Boy capable — logical thinker.
Child very truthful.

Maternal uncle inventor.
Very poor foreign family.
Boy has musical ambitions.
Father very dictatorial.
Very ordinary family.
Child lovable and conscientious.
Boy very untidy, but does fine art work.
Very musical.
Plays violin.
Boy superior to family.
Mother very superior.
Works well in school.
Father's brothers are noted doctors.
Ass't mother to younger children.
Paternal family mechanical and clerical. Maternal people professional.
Very ordinary family.
Pugnacious.
Family has long line of rabbis.
Good environment and training in home.
Not especially gifted.
High-type American home.
Very bright.
Fine mind.
Excellent student.
Overgrown and somewhat babyish.
No outstanding talent.
Maternal family descendants of Ethan Allen.
A normal boy.
Good student, good memory.
Fine physical development.
Unusual poise for age.
Family very poor.
Parents are second cousins.

Paternal family includes doctors, teachers, and sculptors.
Home very untidy.
Good environment and training in home.
A little "spitfire."
Wonderful home environment.
Conceited.
Musical ability in both families; father shiftless and careless.
Very affectionate, but seems to lack love at home.
Maternal grandfather self-made, from coal mines to engineer.
Boy has difficulty in learning to read.
Complex nature.
Keen sense of humor.
Mother forbids picture shows, circuses, and all forms of entertainments.
Inclined to be mirror reader.
Boy read at $4\frac{1}{2}$ years of age.
Mother niece of Gen. Robert E. Lee.

SECTION B

Teaching and Enrichment Plans and Projects

ART IN THE HIGH I.Q. CLASSES

I am indebted to the art teacher for the following outline of her work with these classes.

Art in these classes has consisted of such a varied number of problems, individual and class problems, that enumeration of even the majority would be impossible. Below are a few main problems.

1. Staging a puppet show
   e.g., Cinderella
   Hiawatha
   Community Fund — original
   Christmas Play
2. Scenery making and costuming for real plays
   e.g., Columbus Play
   Hansel and Gretel
3. Making shadowgraphs
   e.g., Billy Goat Gruff
   Red Riding Hood
   French Plays
4. Making Greek frieze
   e.g., Story of Cadmus —
   Correlating with history and geography, and supplemented by study at the Art Museum
5. Making large travel posters
   e.g., Depicting main points of interest on trip from Cleveland to Philippines by way of Panama Canal
6. Making history magazine covers and illustrating material within
7. Making posters and invitations for various school activities
8. Arranging and decorating the schoolrooms
9. Making gifts for Christmas, Mothers' Day, etc.
   e.g., Decorating bread boards
   Making lamp shades and calendars
   Decorating and making boxes
   Painting scenes and framing them

Costume designing and interior decorating become problems in the making of the puppet shows and in staging real plays.

Figure work is obtained in the making of puppets and in poster work.

Lettering problems are worked out in poster work and Christmas cards.

A feeling for good design is introduced with the making and designing of Christmas gifts and in poster work.

Picture appreciation is taught through the actual construction of pictures rather than by picking apart and ruining beautiful pictures. Here I refer to the making of such pictures as the Philippine posters and the scenes from Cadmus. Understanding through experience, through actual doing, how to gain unity and harmony in mass and color, a child can't help but appreciate it in the pictures of others.

The aim in the art work has been to keep away from the formal — labeled, as it were, problems. The children are unaware that dressing dolls artistically is costume designing, or that straightening up one's room is interior decorating, but they know why they are doing it.

When the art work so blends itself with the life of the child that he lives it, then art in the high I.Q. classes will have succeeded.

MARGARET N. WAITE
High I.Q. Art Teacher, Cleveland Public Schools

ATHLETICS (GYMNASIUM)

The following report of the teacher of gymnastics is a contribution to our understanding of the work in these classes.

Miles School

At the beginning of every lesson I gave a free play period. There was quite a little equipment in the gymnasium, and the children learned to use all of it. They were much more free than the other classes, in spite of the fact that the discipline in this school building was more strict than it was in most of the others. I have the feeling that the free play period did much in the way of giving them confidence in themselves, as well as giving them a chance for complete relaxation.

The children were excellent in rhythm, and learned a great many dances during the year. Many of the dances I taught were ones

to interest the boys, such as lilts and clogging, and then they were very willing to take part in all the other dances.

John Burroughs School

These children had a few minutes for free play also, but not as much as was needed. As there was no equipment, they had to be content with running, jumping (broad and high jump), and basketball throwing. After the playground equipment was put in the yard, they had a more varied period.

They did a great deal of English country dancing, finishing the 4th, 5th, and 6th grade assignment, and then doing the more difficult dances given to advanced pupils.

Milford School

Once a week we had a period in the gymnasium, and the children played freely, for a greater part of the period — doing stunts, tumbling, and playing with basket balls. After the regular gymnasium periods started, some of the children made a marked improvement. They were very poor in rhythm and team work, but at the end of the year they were doing "Sailor's Hornpipe" very creditably.

Denison School

The predominant accomplishment of the class was the socialized work being done by it. When it was first organized, the members seemed a heterogeneous mass, so far as social characteristics were concerned. Gradually they began to see that they were a social unit, responsible to other members of the class as well as to themselves, and that certain courtesies and rights were due their classmates.

Committees were organized for group work in all their activities until they could take the initiative in conducting their own classes or delving into the subject at hand from all angles.

The social life of the group has been most pleasant. In nearly every case the children who are intellectually capable have shown themselves also socially capable. They disposed of most cases of discipline themselves.

This is the youngest group in the experiment, many of the children being only seven years of age. They have been taught typing,

using the touch system, with tests given on typewriters that have no letters on the keys. They respond best to work that requires reasoning, excelling in the language arts.

(Signed) Anna Horn
Gymnastics Teacher

A PROJECT DESCRIBED (CIRCUS)

The following account of the circus described in the text was furnished me by the teacher. It gives a more complete idea of the project than the earlier description. This class was composed of first-, second-, and third-grade pupils.

Our Class Circus

It was springtime. Posters and billboards all over town proclaimed the coming of the Big Circus.

One afternoon one of the children announced that he had never been to the circus and would like to see "a real three-ring circus." This led to discussion about the coming circus. Some of the children had had an opportunity to see a circus; others had not. Finally, the teacher asked the question: "How would you all like to go to the Big Circus?" Of course they would all like to go, but where would the money come from? The children were afraid that they couldn't get money for such a purpose; so the teacher asked: "How could we make some money? What could we do to get enough money so that we could all go to the circus?"

After discussing various ways and means, it was decided to have a circus in the schoolroom. Here we had our objective. We wanted enough money to go to the real circus. It was a live situation and met with great enthusiasm. A general discussion was held and many suggestions made, such as selling balloons, making circus lemonade, making candy to sell, popping corn, etc.

The teacher said that although all these suggestions were good, unless a definite plan was followed the circus would not be a success. She told of having had the opportunity of seeing how perfect organization makes the circus a success. Once a circus train was delayed by a railroad wreck. The crowd of people were assembled, waiting for this circus train, which arrived at the time set for the first performance. The fact that each man had his particular task to perform, was one unit making up this vast whole, enabled the circus to

put on its performance in a remarkably short time. The children saw the point of this analogy, and set to work to draw up a definite plan of action.

First, committees were organized and chairmen in charge of them were appointed. The following committees were appointed:

An advertising committee
An art and decorating committee
A committee in charge of the puppet show
A costume committee
A committee in charge of lemonade and candy stand
A finance committee. Treasurer and assistant

The children decided that the first thing to do was to get people interested in our circus. We thought that posters would be the best medium for our advertising. Accordingly the committee on advertising planned the posters, made them, and placed them advantageously in the halls of the building. Realizing that the circus parade plays a large part in the publicity of a circus, and realizing also that under these circumstances a regular circus parade was impossible, we compromised and had a frieze of the circus parade, starting with a mounted policeman and ending with the proverbial calliope, placed on the wall above the blackboard in our room. To make this a realistic representation of the ideal circus parade necessitated a great deal of reading and study and art work on the part of the committee.

The question of decorations in the room was the problem of another committee. As we wanted our room to look as little like a schoolroom as possible, and to have the festive air of a circus, the art-decorating committee set to work with a will. Our shadowgraph screen served as an excellent booth for the dispensing of candy and lemonade when attractively decorated with paper flowers. On the day of the circus, balloons of many colors lent a particularly gala air.

The committee in charge of the lemonade booth made pink lemonade, popped corn, and made candy in the school kitchen. One member of the committee dressed as a little candy girl and on the day of the circus went from room to room selling candy. There was such a demand for the candy that we called upon the parents for assistance, as we did not have time to make more candy, and at the very last we resorted to buying candy so as not to disappoint the children who came to the circus and who wanted to buy candy.

The children in charge of the puppet show worked long and hard. First they painted the scenes to give the effect of a circus tent. For this they used unbleached muslin and a barrel hoop for the center ring. The puppets which they made were jointed and weighted down so that their movements were very realistic. The puppet characters were:

A trainer and a clown
The trained camels, Hump and Bump
Long Neck, the Giraffe
Stripes, the trained Zebra
The two bears, Snow King and Blacky
The three elephants

The child who handled the trainer puppet had a very keen sense of humor, as well as the ability to think quickly in an emergency. Once, when one of the elephant puppets became so badly tangled just before its appearance that it seemed confusion behind the scenes would be unavoidable, the trainer rose to the occasion and announced that he was sorry that Minnie could not appear. She had three-day measles. This saved the day and was met with great applause. It was most apropos, for there had been an epidemic of three-day measles in the building and a great number of children had been out of school. The clown also served as a humorous touch. He told funny jokes and tried — ineffectually, of course — to walk the tight rope.

The clown band and director furnished the music. This band consisted of a piano (played by a member of the class), two triangles, one horn, two violins, and a drum and bells. A trained monkey, giraffe, and camel added further interest to the performance, as did the dancing clowns, a boy and a girl. A merry-go-round was made from a barrel hoop. The animals on it were cut from cigar boxes with a coping saw and then painted. The ensemble, which was run by a motor kindly lent to the class for the occasion, helped materially to add a touch of true circus atmosphere to the room.

The committee in charge of the costumes measured the children participating in the circus and made a list of pins, needles, and other material needed, before starting downtown. They made their own purchases, including among them, in addition to the materials, a small sewing machine. Then came the work of making all the costumes for the clowns in the band and for the trained animals. The

children cut and sewed all their own costumes. This responsibility of estimating, purchasing, and creating, in connection with the costumes, gave them an excellent opportunity to acquire some first-hand knowledge relative to cost of materials and also served as an excellent lesson in arithmetic.

The children discussed the necessity of having some one take charge of finances. At first it was thought best to have the teacher take charge, but upon her suggestion it was decided to appoint a treasurer and a finance committee. Since it was necessary to spend some money for supplies, the necessary amount was advanced to the class, this being increased by a sum which was donated to help the circus cause. The treasurer kept a list of all expenditures.

The school circus proved a big success. At the final count the treasurer found that we had $28.31 to our credit. This money was collected via the admission price of 1¢, and the charge of 1¢ for candy or lemonade. We made arrangements with the neighborhood bank to permit the children to open a checking account; so the treasurer and his committee went to the bank and opened an account in the name of the class. He then issued checks, signing his name as treasurer. His first check was made out to buy the tickets for the real circus.

Finally the gala day arrived, but I do not think the realization of their dreams gave them any more pleasure than the work and planning for their own miniature circus. It is almost impossible to estimate the value of this project, as it gave the children such wide and interesting experiences.

MARGARET F. BOCK
Teacher, Wade Park School

SECTION C

The Work of the Elementary Children

The following letter is the work of a third-grade, high I.Q. child in the special class. This is a photographic reproduction of the original.

Cleveland Ohio.
Mar. 19, 1926.

Dear Dr. Goddard:

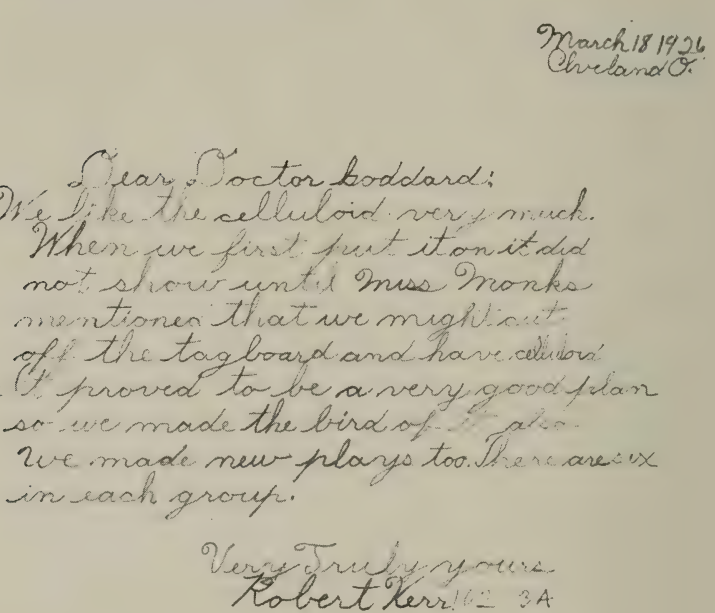
We thank you very much for sending the red celluloid for our rabbit's wings. When we first tried the red celluloid it didn't show. And we told Miss Monks and she suggested we cut off the paper wings. Then the red might show. We did so and the edges showed. We made the bird of red celluloid and it looked like a real bird flying in the forest.

Please come again so we may give it better. We are making some new shadowgraphs. We wish you would come to see them.

Very truly yours,
Thelma Ridel

Wade Park School,
Room 102
3A

The next letter shows the handwriting of its author (reduced about one half).



March 18 1926
Cleveland O.

Dear Doctor Goddard:
We like the celluloid very much.
When we first put it on it did
not show until Miss Monks
mentioned that we might cut
off the tagboard and have celluloid.
It proved to be a very good plan
so we made the bird of it also.
We made new plays too. There are six
in each group.

Very Truly yours
Robert Kerr 3A

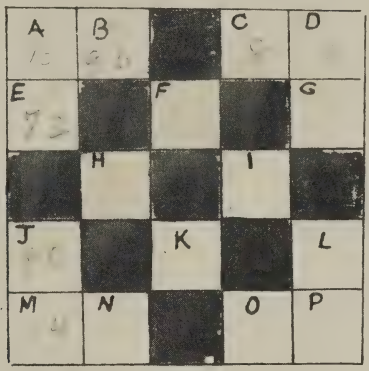
A POEM BY A 4B CHILD

WINTER

In the frozen winter time.
When the skies are gray.
Then we wish for Santa Claus.
To come around this way.

MARION KING
4B, Wade Park

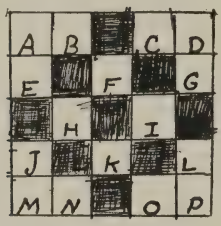
High I.Q. children in the fifth-grade Special Class have made use of the crossword puzzle interest to add fascination to their number work.



Clues

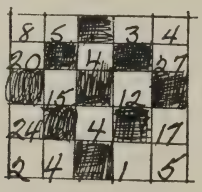
A = 10
B = A + 9
C = 2 X 4
D = ½ of 4
E = (B + D) - 20
F = C X D + 2
G = A/D
H = C - D
I = 5 X B - 40
J = C + E
K = B - D
L = E + D
M = D X 2
N = A + C + D
O = 8 X C ÷ 2
P = ⅓ of 48

Ruth King



A = 2x4
A x B = 40
C = A-B
D = (2xC)-2
E = (AxC)-D
F = E ÷ B
G = (FxA)-B
H = BxC

I = (BxF)-A
J = 2xI
K = 3xA-B
L = 3xF+B
M = ½ of D
N = Same as D or F or K
O = ½ of M
P = 3xO+2



Ans. 155

Denzel Crooks
Room 305
Wade Park School

A SIXTH-GRADE CHILD'S STORY

Explanation by the Teacher

One day the children of the class read a notice on the bulletin board advertising for a continued story for the school paper.

They decided that they would like to write this story. We had been reading several historical novels, and the idea occurred that the children of the building would enjoy a historical novel.

At this time the class was doing work in connection with Greek and Roman history.

Through class discussions, conferences, and book reports, these facts were given by the class:

I. A good historical story must have a historical-event setting.
II. It must be true to facts.
III. The author should have a purpose in writing the story, this purpose to be set forth in the preface.
IV. The points to remember in writing a story were:
    1. Logical sequence.
    2. One main interest that is carried along through the story, which comes to the highest point of interest in the climax.
    3. Climax to be at the end of story.
    4. Choice of words.
    5. Watch sentence construction.
    6. Punctuation.
    7. Paragraphs.

Then the skeleton or plot of the story was written so that the children would have the plan of the story as a whole.

The children used their language books for English reference and their dictionaries for choice of words.

The class has never had a formal English lesson, but they know when a difficulty presents itself, and they overcome this difficulty themselves by using their language books.

(Signed) Miss Greiser

Denison (Fifth- and Sixth-Grade Children)

What Ladas Found Out

Preface

If you have read "The Odyssey" and "The Illiad" you know that ancient stories are very interesting. I have endeavored, in this story, to give you a closer view of the home life of the Greeks and the Romans.

Caroline Zimmerly.

What Ladas Found Out

Part 1. Chapter One

Ladas was a boy twelve years old. He belonged to one of the oldest and greatest families in Greece. Nestor, his father, was a councilman. Old Nestor had plenty of money. Egerea was a good mother, and Gelo was as good a brother as there was at that time, so Ladas was very happy.

In spite of all his happiness, Ladas was not conceited. He was as polite and gentle a lad as you could find in all Greece.

This family lived in Corinth, a city in the eastern part of Greece.

It was early morning. The sun was shining brightly. When Ladas awoke he saw his favorite slave waiting to dress him.

"I am so happy," he cried. "Is it not a beautiful morning, Phraanes?"

"It is, truly," the slave replied.

"Hurry and dress me," said the boy, "today I am to race with Gelo in the courtyard."

Gelo had promised him the day before he would race with him.

Phraanes dressed him and then he ate breakfast which consisted of bread, wine and fruit.

After breakfast he went out into the courtyard. There stood Gelo beside the fountain.

"How are you brother?" asked Ladas.

"Very well," said Gelo, "But come let us race."

"Here is the race course," said the lad. "We start at this wall, circle around the fountain, and come back to the wall again."

Gelo won the race because he was the older and the stronger of the two.

After the race Phraanes called them to dinner.

Ladas sat with his mother all afternoon.

That night when he went to bed he said to himself, "My, but it is wonderful to be alive!"

Chapter Two.

The next morning Ladas got up before the rising of the sun. He had to because school began at sunrise. Phraanes dressed him as usual. After eating, he washed his face and hands at the fountain. When he was clean he started for school.

First he took a lesson on the lyre. The master said he did very well.

Next he was instructed in reading and writing.

Geography was easy. It was like a fairy tale. The earth was supposed to be flat. Around it flowed a large river. This river was the ocean. Beyond it was darkness in which lived many fierce animals. The sky was two valuts. At night the dark one shut down and in the day time it rose, revealing the light one.

We read their history for pleasure.

Ladas believed that the gods showed themselves during the Trojan war, as much as we believe that Washington crossed the Delaware.

Besides these studies he was taught gymnastics. The Greeks believed in training their bodies as well as their minds. If you asked Ladas about it, he would say, "Zeus and the other Gods would be displeased if we did not have strong bodies."

Greek teachers were very strict, but Ladas was a good scholar, and the master seldom had to use the rod on him.

Chapter Three

The next day was a holiday. Everyone went to the Acropolis to worship the Gods and Goddesses.

"If you please Diana, the Goddess of the Hunt," said Egeris, "you shall never lack meat. If you please Bacchus the God of

Wine, you shall not thirst. If you please Venus and her son, Cupid, you shall be blessed with a beautiful wife, and a little son.

Ladas took with him many things, that he might make sacrifices to the Gods and Goddesses.

While they were in the temple, one of their soldiers came running in.

"What does this mean?" demanded Nestor, "it is against the law to interrupt us in our worship."

"The Roman army is invading Greece," cried the exhausted soldier.

"Oh, Athene, help us to overcome the Romans," prayed the people.

"Come! All ye men of Corinth, who are old enough to fight," said the ruler.

"Alas! Alas!" mourned Egeria.

Gelo and Nestor did not mourn.

"Now, I shall have a chance to prove my skill as a warrior! said Gelo.

"He must go," said Nestor. "It is the rule."

It was settled. Gelo must go.

Chapter Four

It was afternoon on the battlefield. Gelo was in the very front line.

The Romans were advancing and Greeks were retreating.

"It's no use fighting," said one soldier.

Gelo kept up his spirits. "Come!" he said, "Let us pray to Zeus."

They made a sacrifice and prayed.

The Romans still advanced.

"The Gods are against us," said a soldier.

"No one shall say I am a coward," said Gelo.

In spite of Gelo and the others, Rome conquered Greece.

They killed all the men that were old enough to fight, but they considered Gelo too young.

"Please do not separate the members of our family!" begged Gelo, but his entreaties were of no avail.

They were put on different ships and taken to different places.

What Ladas Found Out

Part II Chapter 1

We left Ladas on a ship. With him on this ship, was Mucius, his captor.

Mucius saw that Ladas was a strong, but gentle lad, and he thought he would make a good slave for his children.

They landed on the bank of the Tiber river.

Here Mucius was met by Portia, his wife and her three children. Decius, the oldest, was a boy. The other two were girls.

"I am glad you have come home, father," said one girl.

"What did you bring me?" inquired the younger girl, who was three years old.

"Hush!" commanded Portia. "Father is tired."

"Come, we must make ready for the Triumphal Procession, said Musius," and afterwards you children shall see what I have for you."

The Triumphal Procession was a large parade. It took place after the Romans had been victorious in battle. In it marched soldiers bearing paintings, statues, crowns, and pottery from the conquered country. They also carried statues of the villages they now owned on the points of their lances. Then came the conquered kings, princes, and noblemen, and last of all the victorious general.

When the Parade was finished, Musius showed Ladas to the children.

After that, he went to the Forum to hire a teacher, who would teach the boy the Roman language.

Chapter 2

Ladas mastered Latin, and proceeded to teach Greek to the children

Every day, he escorted Decius to school and brought him home again. At school, Decius studied reading, writing, arithmetic, music and history. His history was the pagan religion but besides, he often heard stories of "Horatius at the Bridge" and "Cincinnatus at the Plough." He learned arithmetic with the aid of his fingers and small stone counters. He practised on wax tablets, until he

could write well. and then, he used pen and ink, and the blank sides of cast off sheets of papyrus.

Lydas found Decius very interesting, but Decius' honor did not permit him to think the same of Ladas.

Chapter 3

Poor Ladas had a hard time of it. Mucius, Portia and Decius treated him very badly. The girls were a little more considerate, and he developed a strong affection for Caspeia, the younger of the two.

If it had not been for little "Tassie", as she called herself, he might have cried oftener, but he had a strong will power, and with a little help he could hold back his feelings.

One day Portia took the children to the Forum. Lydas stayed at home.

When they got back, Portia called them all together.

"What impressed you the most?" she asked of Decius.

"I was greatly impressed by the picture of 'Horatius at the Bridge', declared Decius.

"What was your eye most attracted to?" she inquired of the elder girl.

"I was interested in the beautiful statues and paintings," she replied.

"I liked the statue of Cupid best" said Tassie.

How Ladas wished he could have gone, and how he wished he could see his mother again.

Chapter 4

Although Ladas did not often cry, sometimes his feelings carried him away, and he could not help it.

Caspeia sometimes saw his tears, and wondered what was the cause of them. One day she decided to ask him.

"Why do you cry?" she asked, tenderly.

"You would not understand if I told you," he replied.

"Yes I would. Please tell," she begged.

"I am lonesome for my mother, father, and brother," he said tearfully.

"Tassie" said nothing, but she pitied him, from the bottom of her heart.

Afterwards, she told her brother and sister, and Decius, told his mother and father.

"The very idea!" said Portia, angrily.

"Slaves were not made to be pitied," said Musius.

Poor Ladas. It looks as though he will have to wait a long time before starting out to look for his parents.

What Ladas Found Out

Part III Chapter 1

Many months passed.

Most of the family forgot about Ladas' great longing.

"Tassie," did not forget, and she kept reminding her sister about it.

One day, as they were sitting out in the courtyard, one of the girls started a discussion. I forgot to tell you that the name of the elder girl was Flora. She was named after the 'Goddess of the Flowers' and she was very pretty for her age. It was she who started the discussion.

"I think," said she, "That we should help poor Ladas."

"I always did think so," added "Tassie."

"I didn't!" Decius looked disgusted. "He is only a slave. I guess I'll go now."

After he had gone, the girls conversed in low tones for some time.

"We'll do it," Flora said at last.

They looked around until they found Ladas, and they told him their plan, or rather "Tassie" did.

"Ladas," she said. "We have planned how you are to escape. My favorite slave is to watch the gate to-night, and he will let you pass, because I shall tell him to. You are to take with you, bread, fruit, and a flask of wine."

Ladas hated to leave Tassie and Flora, but he knew that if he wished to find his parents, he must start very soon!

He decided to leave that night.

The girls packed him a basket and he easily slipped out of the gate, into the dark shadows. Then he ran.

What will happen to Ladas?

Chapter 2

The next day, Mucius decided that he would like to ask something of Ladas but he could not find him.

"Where is the slave boy that escorts Decius to school?" he inquired of Tassie.

"I don't know," she replied truthfully.

"Do you?" he asked Flora.

"No," she said, "I don't."

For a great while, Mucius searched for Ladas.

Tassie's slave began to wonder whether he had done right or not, by letting Ladas escape.

"Who kept the gate last night?" demanded Mucius.

"I did," said the slave, "and I saw the boy escape, but he slipped by so quickly, that I could not catch him.

"This crime must be punished by death!" declared Mucius, "and I shall send men out to search for this rebellious slave."

Will they find Ladas and bring him back or will he escape their clutches?

Chapter 3

Ladas hid in the daytime, and traveled only at night. He often went hungry, but sometimes he begged food from friendly innkeepers, while some other times he earned some money and bought food.

He was always on the alert, and at night, when he heard footsteps or the sound of hoofbeats on the road, he hastened into the shadows.

One night, as he was slinking along the road, he heard hoofbeats, and they were very loud.

He dodged into the shadow, as usual.

Oh Ladas! Why did you dodge? The boy on horseback, was your brother Gelo, who had just escaped from his master.

Chapter 4

Ladas had traveled many miles. It was raining and he was very wet, tired and hungry. He decided to seek shelter at an inn. All the rooms were taken, but he settled down in a corner, and went to sleep.

When he awoke, he saw three people passing. He recognized Nester, Egeria, and Gelo.

"Mother!" he cried.

"My boy!" she exclaimed.

After that, he was welcomed by Gelo and Nester.

All of a sudden, Ladas' face fell.

"We are to-gether," he said, "But only for a while. Our masters will find us and separate us again."

"It is not so" his mother assured him. It has been found, that your father has great teaching ability. He and his family are free. He found me, we found Gelo, and now we have found you."

With these words, she closed her explanation.

The family moved into a small house.

They often saw Tassie, Flora, Decius, Mucius, and Portia.

One night Ladas said to his mother. "I have experienced the sorrow, as well as the joy of life, but I am all the happier because I have experienced this sorrow."

When he grew up, Ladas became a great teacher and philosopher.

The following poem shows what some children can do when allowed to express themselves.

WHEN THE LEAVES FALL

Jack Frost is a terrible, bold, old fellow,
He paints the leaves all red and yellow;
Which only makes them die you know;
And then they're buried beneath the snow.

They crumble and go, I know not where,
And there the trees stand cold and bare;
The North Wind whistles through each day,
The trees must dance to the North Wind's lay.

Ruth Hamilton
Wade Park School, Sixth Grade

SECTION D

Junior High School Work

OUTLINE OF A WEEK'S WORK

The following weekly programs from the Thomas Jefferson Junior High School will give an idea of the work done in the six high I.Q. classes — the Enrichment Classes, as they call them there. This was the work for the week of March 21, 1927.

MATHEMATICS

Miss Cooke

7A: Money-lending:

Class discussion has raised the question as to why so much business is done on borrowed capital, and as to the status today of the borrower and the lender.

Problems in buying "on time" and "short time" loans will be given. A discussion of security, what it is, and why it is given will be held.

8B: The study of angles and angle measurement. The need for measuring angles will be brought out in scale drawing and map making. The use of the protractor will be explained.

The kinds and notation of angles will be illustrated.

Report on the history of angle measurement.

8A: This class is making scrapbooks of the occurrence and uses of geometric solids. They are including geometric figures, pictures, definitions, formulas, etc. The use and measurement of cones, pyramids, and spheres will be discussed this week.

9B: The meaning of exponents as another way to represent multiplication, an abbreviated way of expressing a process, will be explained. The laws of exponents in multiplication and division will be developed. Problems involving substitution in formulas with exponents will be given. Further practice in solving equations and involving positive and negative numbers will be given.

Report: The development of positive and negative numbers.

9A: Continuation of the work in algebraic fractions outlined last week.

ENGLISH

7B: 1. The class is preparing for presentation a short program of reproduced and original poems and stories about animals.

2. Book reports will again be written. This time in class period. Readings will determine the degree of improvement in summary form since first attempts.

3. A spelling lesson will use lists of words assigned to the 8A course of study.

7A: 1. Having concluded the reading of "Midsummer Night's Dream," the class will work toward a simple preparation of one scene. Much of the preparation must be made in class time.

2. Reading and discussion of the second written book reports of the term will help to stress essentials of the summary, and elimination of details.

8B: 1. Following oral reports of short stories, including the Kipling stories assigned, the class will write original short stories. A previous recitation will be given to questions and discussion that the best results may be obtained.

2. Written book reports read and discussed.

8A: Preparation of a short play written previously by the class will require some attention this week. Book reports will be read and discussed. Study of verb tenses will be continued.

9B: "Ivanhoe."

1. The first reading of the novel concluded.
2. Class discussions of the story.
3. Field trip to the Art Museum for a lesson on armor.
4. Written composition on armor.

9A: 1. Individual analysis of a poem based on Hitchcock text:
   a) Unusual words and sentence structure
   b) Compactness
   c) Images
   d) Figures of speech
   e) Alliteration

2. Gayley's "Classic Myths."
   a) Preparatory to the reading of the "Iliad," the class will read freely from this collection, and each will make an oral report of a myth chosen.
   b) Detailed study of the story of Troy as found in Gayley.
   c) A written summary of the story later.

GENERAL SCIENCE

7B: The reports on building materials will be completed this week, and work will be started on notebooks, which will consist of planning and illustrating an ideal home.

Mon. Complete the laboratory work on the comparison of building stones.
Tues. Special reports on cement and plaster in construction.
Wed. A study of different roofing materials, including reports on asbestos, slate, asphalt shingles, and tin.
Th. & Fri. Laboratory work on notebooks.

7A: This class has begun work on a new unit: How we safeguard our health. Last week we prepared nutrient agar in the laboratory and set up an experiment to determine whether the air contains bacteria. We shall proceed with a study of bacteria as the cause of disease.

Mon. General discussion of bacteria. Some slides will be shown, and some of the children have special assignments for class reports.
Tues. & Wed. Laboratory: Microscopic study of bacteria obtained in the experiment.
Thur. Class discussion of ventilation and its relation to health.
Fri. A study of the human breathing system.

8B: Continuation of work on the unit: The earth on which we live.

Mon. Special reports on the following constellations: Orion, the Big Dipper, Perseus, the Pleiades. Slides.
Tues. Continue special reports on the constellations: the Little Dipper, the Dragon, Scorpius and Hercules.
Wed. & Th. Laboratory: To determine the cause of our seasons.
Fri. Gravitation. Special report on Sir Isaac Newton.

8A: Continue work on the unit: Generating and using electricity.

Mon. The study of electric cells, begun last week, will be completed.
Tues. How is electricity measured?
Wed. How may electric cells be connected? Connecting cells in series and in parallel.
Th. & Fri. Laboratory work on magnetism: The difference between a temporary and a permanent magnet; To study the lines of force about a magnet.

9B: Continue work on the unit: Generating and using electricity.

Mon. Class discussion: the theory of electricity, positive and negative, static electricity.
Tues. & Wed. Laboratory: study of electric cells and how they supply electricity.
Thur. Special reports on the electron theory, and men of science in the field of electricity.
Fri. Question day. Each child is to bring to class any questions which have been puzzling him, for class discussion.

9A: Last week, when we had our lesson at the Museum of Natural History, Miss Huntley asked the class to return for another period on March 25. At this time, the class is to present a program summarizing all of the material which we have obtained during this series of lessons on rocks and minerals. On Monday, each pupil is to bring a written outline of his suggestion as to what form the program shall take. We hope to get definite plans formulated and start rehearsing this week.

SOCIAL SCIENCE

7B: Cleveland — location — continue.

7A: The Great Lakes — Interdependence of people — continue.

8B: United States Possessions — Each member is completing a historical frieze of the additions to the U. S. The class became so interested that it decided to make these friezes large enough to use permanently, adding to it as other problems are studied. An unusual enthusiasm carries some too far. We have several friezes more than 12 ft. long.

8A: The causes and results of war in or with the U. S.

Continue the Revolutionary War. The causes leading to the war became purely academic in the minds of the pupils; so, to change the procedure, we have organized a parliament and pass laws on one side of the ocean and organized various parts of the colonies on the other side. Reactions of both sides to the actions of the other will be illustrated. This is to be only semidramatic. All talks before parliament and the assemblies will be extemporaneous, except a few famous utterances of Patrick Henry and others.

9B: Continue city planning.

9A: Continue — How laws are made, in order to have the making of a law thoroughly understood. We have organized into a House of Representatives. So far we have held a party caucus: 9 Democrats, 11 Republicans, and three Independents. After much persuading of Independents, a Republican Speaker has been elected. Bills have been brought in by each member and will be referred to committees which have been appointed. Several of these bills are being printed for us in the print shop.

FRENCH

Mrs. Fisher

Lesson XX

8B: Purpose: To teach the personal pronouns — called disjoints or toniques.

Procedure: Teach by oral drill the different uses of these pronouns. I usually use a noun in the sentence and have the children change it to a pronoun. It is only a matter of memory *when* to use this list of pronouns and is learned rather readily.

8A: Mon. General Review of reflex verbs and the imperative affirmative.
Tues. The imperative negative (*b*).
The use of ne-----que, ne-----jamais, and ne-----point.
Wed. & Th. Written exercises at the end of the lesson.
Fri. Written test on the entire lesson. During the last twenty minutes the class will give French dramatizations, play French games, etc.

9B: (*a*) Finish and dramatize Lesson XXVIII.
(*b*) Written and oral exercises at the end of the lesson.

9A: On Monday this class will take a test on the irregular verbs given in *Cours Pratique*. We shall then begin work in the advanced grammar (one day a week), and read and dramatize the stories from *Contes Gais* and spend one day a week on irregular verbs and exercises as presented in our advanced irregular verb book.

9A: Special
Mon. Advanced grammar.
Tues. Irregular verbs and exercises.
Wed. Th. & Fri. Reading and dramatization from *Contes Gais*.

A PROJECT IN MATHEMATICS

As an illustration of work done by an 8B class of gifted children, we are reproducing *Primitive Shelters*, a booklet originally published by the class.

Miss Cooke, the teacher, explains in her introduction the purpose of the project.

PRIMITIVE SHELTERS

A Project

At Thomas Jefferson Junior High School, Cleveland, Ohio

INTRODUCTION

This little book is the reproduction of a program held in the class in intuitive geometry for the 8B enrichment group in Thomas Jefferson Junior High School, in November, 1925.

The class had observed the most common geometric solids — prism, cone, sphere, cylinder, and pyramid — and had become interested in noting the occurrence of these forms in nature and in man-made objects. Several children brought in pictures of African huts, Eskimo igloos, et cetera, from geographic magazines to illustrate the use of these shapes. Then some children suggested that they construct several models of these primitive shelters. The seven shelters herein discussed were selected.

The class divided itself into committees for work, and each committee chose the shelter its members wished to construct. Reference reading supplied information as to the customs of the people who originated the shelter, and the materials of which it was built. The children decided what materials they would need for their model, and modeling clay, paint, beaver board, straw, and many other things were supplied by the school. The children also foraged for much of their material themselves. Measurements were then made, and the actual construction begun.

Each model was constructed on a beaver-board base measuring twenty by twenty-four inches. The children tried to make the scene surrounding the shelters in keeping with the information obtained from their reading, and to have a pleasing composition for the whole set, but little attempt was made to construct the shelters according to scale. The mathematical side of the project was kept in the foreground as much as possible, and so the geometric forms were given greater prominence than construction to scale would permit.

When the models were all completed, the class gave a "house-warming," at which one member from each committee told about his particular shelter and of the lives of the people who lived in it. Mr. Seybold, the principal,

The Pyramids.

who was present at the house-warming, suggested to the class that they publish this little book to preserve their work. Accordingly, they wrote out their talks, and one member from each committee made a linoleum cut in the art class. Indeed, the art department gave no little assistance all through the work of construction. The children enjoyed the work and profited not only in mathematics, but in the ability to organize and execute a coöperative project.

MARTHA COOKE

THE PYRAMIDS

BY EDWARD LEWIS

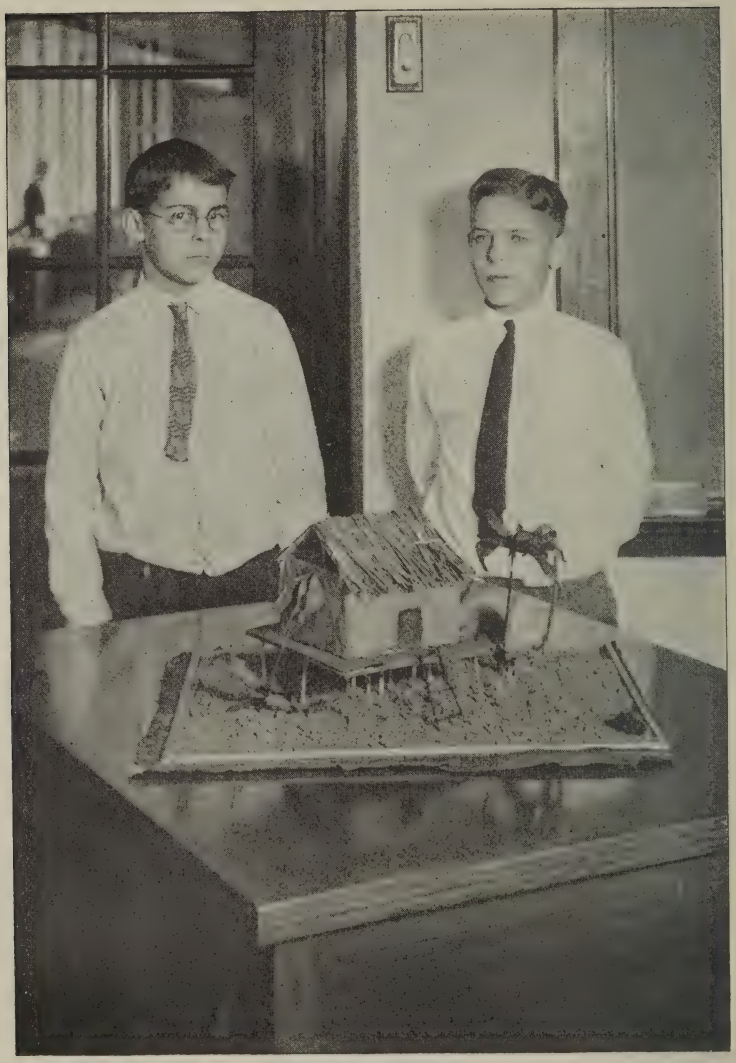
It may seem odd to have housewarming in a tomb, but the pyramids were the tombs of the Egyptians. In ancient times the Egyptians buried their dead in the western mountains. But as time wore on, and as the nation progressed and the population increased the people were pushed farther and farther into the desert. It was now that the need of a better burial place was seen.

In the beginning the men scraped holes in the sand and deposited the body in these. After the discovery of metal the tombs were built much better, being lined with limestone and a small mound built on top. Later brick walls were put in the tombs. In the year 2980 B.C. the tombs were built in a terraced form.

About 2930 B.C. the terraced form was filled in which made the first pyramids.

Kings and nobles soon decided their tombs should be much better than those of the peasants. This caused much competition and in 2900 B.C. the Great Pyramid was finished by King Khufu. This pyramid covered over thirteen acres of land, was nearly five hundred feet high and seven hundred seventy-five feet long at the base. It required 100,000 men twenty years to complete it.

Before the body was placed in the tomb it was soaked in a solution of natron for weeks, stuffed with pitch and wrapped in yards and yards of specially prepared linen. With the mummy were placed in the tomb many images of barbers, laborers, cooks and other tradesmen to provide for him in the Kingdom of Osiris, where the Egyptians believed his body would go. This is one of the reasons the body was prepared, so it could have the form of this life in the next world.



The Borneo hut.

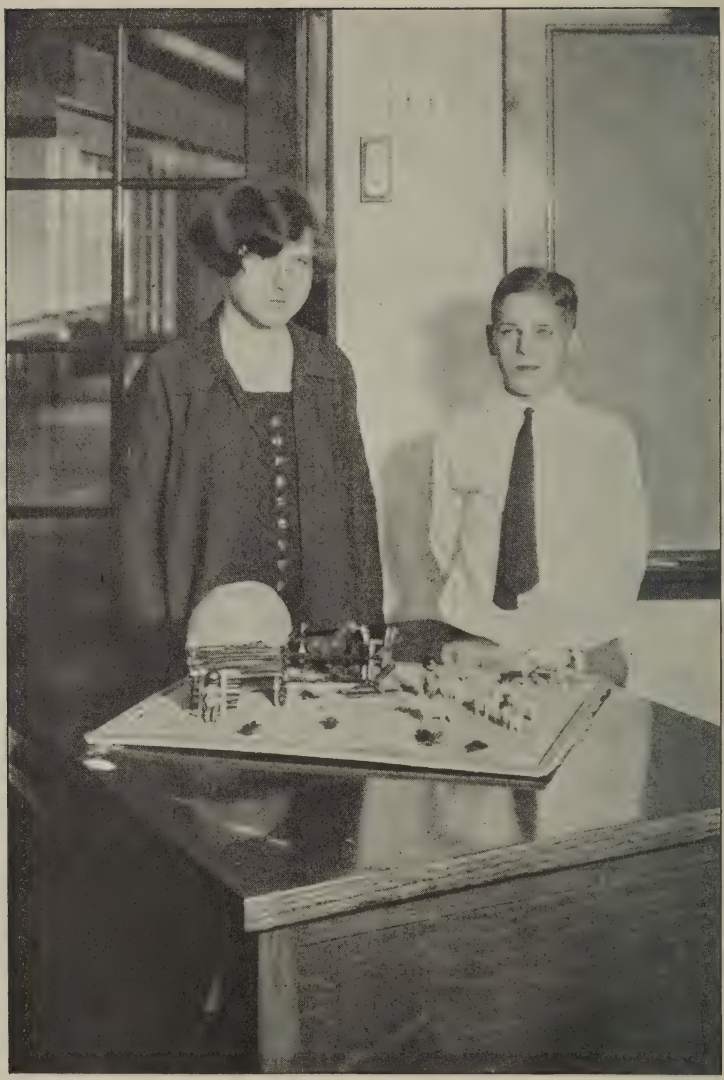
THE BORNEO HUT

By Allen Nace

These huts are built on stilts because of the floods that cover that section of Borneo.

The buildings are made of thatch covered with mud which is soon washed away from the roofs. The houses represent the prism in shape. The space between the roof and wall lets the smoke out and ventilates. There are very few individual huts, most of them contain about fifty families. These huts resemble the ancient lake dwellings of Switzerland, but they were built in perpetual water for protection from enemies.

There are also tree huts which are built in trees. The top of the tree is sawed off and the hut built there. This protects the owner from water and enemies.



The Indian hut.

THE INDIAN HUT

By Marjorie Taft

The people I am going to tell you about are the Navajo Indians. They live on their reservation in New Mexico.

Their huts are made of adobe mud and logs. The lower part of the hut is a prism and the upper part is a hemisphere. Back of the house there usually is a corral. The Indians also have a brush hut for summer.

The Indians usually have two or more burros. Frequently Indians drive along the roads with teams unevenly matched. They have a large mule and a small burro together.

The Indians also have herds of goats or sheep. We saw one herd of over a thousand sheep with one man herding them. Small herds of goats or sheep are herded by Indian boys or maidens.

The men usually have their pipes and sit around and smoke. Sometimes they train horses or make jewelry. They use petrified wood to make jewelry around Holborn and Winslowe, where I saw them.

The women do their household duties, (what few they have), weave rugs, and blankets and make pottery. They also chop wood. They make quite a bit of money selling these famous Navajo blankets and rugs, pottery and jewelry.

The Pueblos

Some Indians live in Pueblos. Most of these small pueblo villages are situated on hills. They are small prism houses and the houses are very near to each other. They are made of the adobe mud. They all have light blue trimmings and most of them have red peppers on the walls.

The tepee.

THE TEPEE

By Jack Bowers

The tepee is of cone shape being one of the few cone shaped dwellings.

The Indians were very superstitious believing in one great God or Manitou with numberless lesser deities. These deities all were represented by a bird or animal, the Thunder-Bird being one of the most frequently seen. Whatever bird, animal, or sign the Indian first dreamed of after his twelve day fast became his symbol and name such as: Running Water, Bounding Elk, etc.

The Indians were, in comparison to conditions, equally as intelligent as the present day person. They had several means of long-distance communication centuries before the invention of wireless, under-sea cables, etc. After building a fire in front of the wigwam they would heap on live limbs, evergreens, moss, etc., to make the fire smoke. Then, taking a blanket of buffalo-skin, they would cover and uncover the fire at intervals with it, making long puffs of smoke like dashes and short ones, like dots in telegraphic code.

The tepees made by these people vary in size but never in the general shape. They are at times tall and slender, or low and wide. They are made of dried deer or buffalo skins sewed together with reindeer sinew.

The people were ingenious in their ways of trapping. For rabbits and other small game, and sometimes even deer, they would bend down a springy sapling and fasten it with sort of a hair-trigger mechanism so that when an animal stepped into the noose, the released sapling jerked it into the air and held it there. The Indian then released and killed it when he examined his traps.

The log cabin.

THE LOG CABIN

By Elmer Lakatos

The pioneer log cabin, which shows the triangular and rectangular prisms, is a signpost in the wilderness showing the way to the bravery and courage of the settler who in order to inhabit the wilderness faced death that lurked in the forest or on the plain. The cabin was not only his home but his fortress to shelter him from Indians and prying beasts.

The site of the log cabin was usually a glade or ridge so as to be out of rifle shot of the Indians. The ground was scraped and leveled for the log cabin. Then the pioneers chopped down enough logs for the cabin; the framework was set up and the sides filled in with logs which were chipped or notched at the end to prevent them from rolling off each other. The roof was usually a thatch or board roof which consisted of tree trunks split in halves with the bark inside. The chimney was made of twigs from the surrounding forest or clay from the river.

The inside room of the log cabin was furnished with benches and a roughly made table. The beds were a heap of pelts and skins. This one room in which the furniture was contained was dining room, parlor, bed room, attic, cellar, and basement and kitchen. The fireplace was their only source of light and heat for cooking.

The pioneer obtained his water from the near-by river or spring, but if this was not available, he dug a well to answer his purpose.

The igloo.

THE ESKIMO FAMILY AT HOME

By Alice Treybal

This set was made to illustrate the hemisphere.

Every Eskimo family has a summer home and a winter home. Neither of these can be permanent as the scarcity of food in the North means constant and laborious migration. In summer a tent of skins, which can be carried from place to place affords shelter enough, but when the freezing weather comes (and it comes early in the North) the Eskimo must have a dwelling which can not be blown over by the strong wind. It must be built quickly in some place where food can be obtained, so the Eskimo father takes his snow knife and starts an igloo.

His skill at this work is amazing. A row of snow blocks is set in a circle and other rows are added until there is a beehive-shaped structure. The snow blocks which are soft when cut, freeze together until in a few hours the igloo roof will bear the weight of several persons. About the only thing which will crush it is a wandering Polar Bear.

The only heat in an igloo is from the lamp which burns seal oil or whale oil with a wick of dried moss. This lamp smokes very much unless it is tended to with great skill. No one ever learns how to manage the native lamp except the Eskimo woman. Care must be taken that the igloo does not get too warm, or the walls will begin to drip. The temperature should be kept barely below the freezing point. If the Eskimo wife finds her walls getting damp and can not control the heat otherwise, she pokes a hole in the side of the igloo. When it is cooled sufficiently the hole is mended with soft snow which quickly freezes to the original wall. It is important to keep the inside of the igloo dry, not only for the comfort of the occupants but to prevent the fur clothing of the family getting wet. Drying it in those short, sunless, winter days is almost impossible.

If an Eskimo can get a few tent poles from the trader, he builds a drying rack outside his igloo, where clothing may be dried out of the reach of the dogs, but poles are valuable when they must be brought on such a long voyage.

An Eskimo family accumulates few possessions on account of their constant moving from place to place to find food. In winter their goods may be loaded on a sledge drawn by the dogs, but in summer they must carry their baggage on their backs, as the dog is an indifferent pack animal. About all they can manage is the necessary equipment for hunting and fishing and indispensable clothing and utensils. The burden of the Eskimo woman has been greatly lightened by the post trader, who has brought within her reach light, strong cooking utensils, which she can carry from place to place. These are much better than her home-made containers of walrus hide or the massive stone pots hewn out by her husband with a bow drill.

Igloo life in winter is enlivened by the presence of a litter or two of the carefully bred Malamute puppies, which are the Eskimo's most valuable possession. While young they are gentle and lovable and make excellent playmates for the Eskimo children. After his first winter the husky dog must live outdoors, as when grown he is perpetually hungry and will not only eat up the family store of provisions, but the deerhide clothing and the seal boots.

In exchange for skins the Eskimos get from the post trader many of the comforts of a white man's life and even some of the luxuries. If an Eskimo is lucky he buys a phonograph. As a race they have an excellent sense of rhythm and like stirring marches and gay songs.

As the springtime sun mounts higher in the sky the igloo walls begin to drip and the family prepares to forsake the winter home which has served them so well. They load up the Omiak, the large skin canoe which they use for traveling and set off for the salmon fishing. A little later they will hunt "Mimeek," the eggs of wild fowl which are very numerous in early summer. They also go after wild berries, huckleberries and cranberries, which make an agreeable change in their restricted diet. Eskimos enjoy their short summer thoroughly and are always sorry when winter comes and drives them back to the igloo again.

AFRICAN HUTS

By Hilda Hernecheck

Africa is the home of the hut. Here, throughout the vast region below the Sahara, the hut prevails everywhere but in the white settlements. These huts are a type of tent with cylindrical walls and cone shaped roof. They are built of grass, leaves, sticks and sometimes small with only one room. The huts can be permanent dwellings or temporary shelters. In the latter case they are built of light wood and other materials and can be taken apart easily and transported elsewhere. When a Hottentot village is set up the huts are so placed as to enclose a circular piece of ground into which the animals are driven at night to protect them from wild beasts. The larger villages have dwellings made of plaster and mud, thatched with straw. But the wandering herdsman lives in a tent. In the mines of the Sahara, the miner lives in huts built of rock-salt covered with camels skin. The huts of the Nubians are low and round-roofed with straw and having no chimneys or windows. All the smoke goes out the door and the cracks in the walls. This doesn't bother the people very much, because they live mostly out-of-doors, their country being dry and rainless.

The people of Abyssinia live in huts of circular shape made of poles daubed with mud and thatched with leaves and grasses. Even the capital where the king lives is made of these huts, the only difference is that they are larger. In the negro country we find the huts much on the same order. Many of them look like inhabited hay-cocks. They rise from the ground and are as large as hay-cocks. These dwellings are large, roomy and comfortable. They are supported by poles which divide the interior into two rooms. These are smaller huts used as a kitchen and others as working houses

The African hut.

AFRICAN HUT

By Jeannette Linder

Huts of every description are found in the wildlands south of the Nile Valley. Almost every tribe has a style of home building.

In the far southern parts of the continent live the Kafirs, black people who have domed-roof dwellings of mud and in other sections are other mud huts of various kinds. Not a few of these mud villages are where wood is abundant, and we wonder why the natives do not use logs. One reason is the white ant, which is found in great numbers in Africa. This little insect will eat anything wooden. It does its work in the dark and will burrow inside of a rafter or post and will eat away until nothing is left but a shell. Then the wood will fall to the ground and if it is part of a structure it will do much damage. These ants are home builders themselves. They dwell in great mounds of many rooms which they construct by mixing clay of the earth with juice or saliva of their mouths. This turns the clay into cement which, as it dries, hardens like stone.

When the natives make their huts they use this cement-like earth which the white ants have prepared. They either drive out the ants or take an abandoned ant hill. By taking water and pounding and mixing they make mortar which they use to cover the framework of their huts, forming excellent walls. They spread this on their floors, also. Then the native's hut is prepared for the white ant.

In many parts of Africa the huts are made of grasses and cane of various kinds. The tribes about Lake Victoria have many such houses. The people of Uganda have towns made of great and small huts of elephant grass, the stalks of which are as thick as your finger. They are beautifully woven that they look like basket-work. The roofs are of a thick thatch which shines like silver gray velvet in the sunshine.

My aunt, when she was a missionary in Africa, entered a hut for a first and last time. The reason was because of the heavy blue smoke in the hut.

The huts we have built show the cylinder and cone.

ENGLISH — PROSE

The following are some samples of 7B work in English. The children were asked to write a paragraph on their favorite resort. These are just as they were written.

FAIRMOUNT JUNIOR HIGH: ENGLISH CLASS

MRS. HEPPERT, *Teacher*

My Favorite Resort.

My favorite resort is my uncle's library. There are many books on the shelves, dark bound and handsome. I like to curl up in the big armchair and read, and keep on reading. If I could, I would read forever. Since I have been able to read I have read these books and yet the supply seems to be inexhaustible. There are books of adventure, philosophy, and I will admit there are some fairy tales. The adventure stories are of all kinds, of pirates, of buried treasure, of adventures up in the north and down south. I am very proud of this library. Don't you wish you had a library all to yourself?

LOUIS GOLDBERG (12 years)

My Favorite Resort.

My favorite resort is the big armchair in our living-room. When I curl up in this chair, with a book in my hand, a fairy touches me with her magic wand. I am still in the chair, but the fairy transports me to different lands. Sometimes I travel to queer lands overseas. Other times I stay here in our own country, but journey to different parts. There is no doubt that this is my favorite resort. Isn't it nice to have a magic chair like mine?

GLADYS STEVENS (11 years)

My Favorite Resort.

My favorite resort is Sixth Lake in the Adirondack Mts. I don't wan't you to think because I say resort I mean a large hotel with many people. In fact the entire population is the storekeeper of the general store where you can buy anything from soup to nuts, and a

few visitors. The large hotel is a small pup tent. Sixth Lake is the smallest lake of the Finger Chain, but what it loses by being small it gains by being plentifully supplied with fish. The lake is surrounded by a dense forest. At it's head is a tall mountain called, Black Bear Mt. It is four thousand feet high. Two hundred feet from the top there are many high precipices. Don't you think this is an ideal spot to pick for a favorite resort?

HARVEY EMSHELMER (13 years)

My Favorite Resort

My favorite resort near the end of the winter is Lake Erie. I love to watch the sparkling white ice as it floats on the waves and inhale the spicy air. I like to peer into the distance for ships that are like tiny black specks. As I watch them slowly move along I wish I could be going along too. Then best of all. The sunset. As the sun goes down the rays touch the floating ice and change them to little pink-tinted islands. Lake Erie is pretty in the summer but I prefer it near the end of the winter.

ELLA STOLTE (11 years)

My Favorite Resort.

My favorite resort is my locked room in the attic. It is here that I spend many cold and dreary nights mixing chemicals. One night I opened my chemical book to experiment number forty-seven. It was an explanation of how to make invisible ink. I thought it would be fun to write a letter to my cousin with this magic fluid and see what kind of answer he would send me. I mixed the essential chemicals and there before my eyes was a bottle filled to the brim with a yellowish ink. I wrote my name with it and as it dried, lo! the writing disappeared. I heated the paper and my name was as clear as ever. I hurriedly wrote the letter to my cousin as I had planned. About three days later when I had almost forgotten about the letter I had sent him, I received his answer. I tore open the envelope and there was a blank piece of paper. I guessed it was written with the same kind of ink I had used. I heated it and the letter was plain to me. I went to my locked room and scribbled him

an answer. From that time to this we keep on writing secret letters in "experiment number forty-seven." Isn't it grand to have a chemical set in a locked room of your own?

JEROME GANS (11 years)

My Favorite Resort

My favorite resort in summer is a fallen tree by the lake. No summer day is so hot and sultry but what a cool lake breeze blows the glistening spray upon the golden sands. The tree extends almost fifteen feet out above the water. Only the trunk and the larger branches remain. The bark has been worn away and the tree is gray and smooth as glass. The beach is only fifteen feet wide at this point and towering cliffs mark its boundary. Some ten feet out and six feet above the green water two branches meet in such a manner as to form a rough but comfortable seat. Here I have spent many hours with a book and a pair of marine glasses. Whenever a column of smoke appears on the horizon I attempt to identify the ship. Great liners, trim little yachts and puffing tugs all pass. The spot is very quiet. The only sounds that break the stillness are the crash of the breakers on the rocks the screaming of the gulls and terns. Many resorts there be but a fallen tree is my favorite.

AARON PALEY (12 years)

My favorite resort in summer is the swing under my aunt's apple tree. I like the place because when I am there I am all alone in blissful solitude with no one to bother me except the buzzing flies. If I am angry at anyone or thing the soft rustling of the leaves seem to soothe my evil thoughts. The swaying motion of the swing as it goes to and fro, seems to spell a charm over me and makes me feel drowsy and content. The merry chirp of the robin as it flits from one branch to another enlightens my heavy thoughts or sadness if I seek the faithful swing for comfort. The beautiful green foliage of the tree keeps the hot rays of the unmerciful sun from shining down on me. There are many reasons why I like the swing under the tree but these are my favorite.

JANE HOLLAND (11 years)

ENGLISH PROSE FROM THOMAS JEFFERSON JUNIOR HIGH SCHOOL

The origin of the three following descriptions is thus explained by the teacher, Mr. Arthur M. Seybold, who is also Principal of the Thomas Jefferson Junior High school where the work was done.

A victrola and a number of records were used to produce the mood which appears in each description. The teacher was well cognizant of the fact that the right atmosphere must be obtained before a good description of an emotional character could be written. On the days in which this little experiment was pursued, the right atmosphere was obtained in the following manner: The teacher told the children that he was going to play a piece of music and that each student would be asked to write what came into his mind after he had heard the record. Then, in a five-minute talk, a selection was motivated. Sometimes, as in the case of the *Valkyrie*, the story background was given. With other records the teacher read poems which duplicated in mood the dominant feeling found in the music. Then the entire class was given fifteen minutes for descriptive writing. At the expiration of the fifteen minutes the descriptions were read. The best composition was selected by vote, and the author was asked to rewrite his work so that the class could criticize it on the following day. The composition was again rewritten and given to the teacher. After the child had received the corrections of the teacher, the work was then recast by the author and placed in the form which appears below.

THE VOLGA BOATMEN

JACK BOWERS

The cold, gray, morning mist of the Volga River surrounded the sleeping boatmen. Crack! The whip of the driver curls cruelly around the body of the leader. Another day of pulling a boat load of produce to the great city. The only sound is that of muffled thudding of the bruised, cut rag-bound feet of the boatmen. Then suddenly they break into a song that is as melancholy and monotonous as their own poor lives. They are accompanied only by the dull, sullen swish of the waters. There is a cry! A young flaxen-haired lad faints from the dull monotony and the strain of the pulling. His

fellows support him and the boat moves on. The traces have cut their way deep into the life of another boatman. These men are past living! They are automatons who are forever tired. Thud! Thud! Thud! It is the death knell of the Russian. A few minutes later there is a splash of a dead body hitting the water. Crack! And the weary toilers move on. God was kind to the lad for the life of a boatman is a living death. Thud! Thud! Thud! On, on, on, forever onward in the sun. Oh, for a drink, even one draught of slimy marsh water! There, they are beside the water but none stop to drink. Night comes and the weary figures drop in the harness for a few hours of rest. Then once again is heard the continual Thud! Thud! Thud!

THE OLD FISHING TUG

Wilma Masson

Chug, chug, chug.
Nothing but the chugging.
Of an old fishing tug.

Sometimes three, sometimes four and sometimes even more hours of the chugging of the old fishing tug is the lot of the fishermen when they are outward bound. At last the nets are reached. And then the long pull, the hard pull of a heavy load of fish takes all of their strength to swing the nets into the boat. Herring here, white fish there and countless numbers of floundering bass — all are hurled into the boat. Splash, a small fish is thrown overboard. Then more sorting and more small fish are cast into the lake. At last it is finished and the boat swings toward the shore, homeward bound with its

Chug, chug, chug,
For 'tis nothing but the chugging
Of an old fishing tug.

Land is reached and a sigh is heaved, not a sigh of profound relief, but a sigh of sadness for only a day is done.

"Reel in the nets, boys," the captain calls.

Slowly, painfully it is done. Now the task is finished and the day's work is at an end.

"Good night boys, be down early in the morning," again the Captain calls.

An answer is muttered but it is lost in the wash of the waves against the pier, for the fishermen are stumbling toward their homes. At last the huts are reached and supper is eaten in dull, dreary rooms. And then they fall to sleep to the recurring

Chug, chug, chug,
Of the old fishing tug.

Some day, perhaps, they will pull in the last weary load. Some day they will make their last journey home. Some day each man will leave all dull, dreary rooms and seek lasting relief from the eternal

Chug, chug, chug,
Nothing but the chugging
Of old fishing tugs.

ENGLISH POETRY FROM THE ENRICHMENT CLASS IN THOMAS JEFFERSON JUNIOR HIGH SCHOOL

WAR

MAY E. STANNARD (12 years)

Fight, march, kill,
It is all there is to war.
The fatigue of the front,
The screams of dying men,
The bursting of shells,
Fight, fight from gray dawn till the end of time —
Will war never cease?
Is there no peace on earth?
Kill, kill-plunge over waste fields
Only to kill. Will war never end?
Tramp, tramp through desolate streets of deserted towns —
Oh the fatigue of war —
Will war never cease?
March, march the steady rise and fall of tired men's boots,
Sick men's boots.
Is there no peace?
Just war?

INDIAN SUMMER

Over the hills and the valleys,
There's a veil of mystic blue,
'Tis a haze called Indian Summer,
That comes each autumn anew.

The leaves that turn crimson and yellow,
In Autumn's mellow glow,
Remind one of Indian campfires,
That burned neath those trees long ago.

Of a bit of smoke, from those campfires,
Of Indian tribes long gone;
But it lingers on till evening,
Like the echo of a song.

The song of a race fast fading
Like the sun sinking low in the west,
But the soul of the Indian warrior,
Shall never, never know rest.

So his spirit returns each autumn
As the year fades fast to its close,
In a haze called Indian Summer,
Where it vanishes, no man knows.

HELEN STANDS (12 years)
Thomas Jefferson Junior High School

THE VIOLET

Silent, cheerful violet,
Dancing in the sun,
Do you close your petals, blue,
When the day is done?

Shy and graceful, sweet and blithe,
Modest, happy, gay,
Lovely slim and gentle as
Back and forth you sway.

Glossy leaves on pretty stems
Nodding in the air,
Rustling in the balmy breeze
Dainty, meek and fair.

Oh happy little violet,
A messenger of spring,
This spirit of joy and beauty
So modestly you bring.

DEBORAH JAFFA (12 years)
Thomas Jefferson Junior High School

SECTION E

A Few Statistics

EXTRAMURAL INTERESTS

The following gives some idea of the prevalence of "outside interests" among gifted children. It is not likely that any random group of children would show such extra-school activity.

The table was made from the responses to the following questions asked of 261 children in these classes:

Have you studied music outside of school? .....
What instrument? ..... *Vocal?* .....
Do you belong to any musical organization such as an orchestra, band, or glee club? .....
Were your lessons under a private instructor or in a school? .....

Are you a Scout? .....
Ever been in camp? .....
Are you a member of the "Y" or a gymnasium? .....

Results of Music Questionnaire

School	No. of Pupils	Piano	Violin	Vocal	Band	School	Private	Scout, Gym, and Camp
Doan	27	14	2	0	0	3	13	17
Doan	28	15	5	2	3	6	19	31
John B.	15	4	5	0	0	0	9	9
Rosedale	25	16	5	6	1	5	18	36
Milford	24	16	2	2	1	11	6	11
Miles	21	12	3	0	1	1	14	7
Denison	24	15	4	0	0	6	16	10
Landon	30	5	0	0	0	0	5	0
Wash. P.	22	3	0	0	0	0	3	0
Wade P.	25	9	4	1	0	7	9	4
Wade P.	20	8	2	0	0	0	10	0
	261	117	32	11	6	39	122	125

PROGRESS SHOWN BY MENTAL TESTS

The writer was allowed to test the children in the gifted classes, and for a time did so. As the number of classes became greater, it proved unfeasible to do this systematically. However, considerable data were accumulated, from which it has been possible to make some interesting and more or less valuable comparisons.

The following tables have been prepared for me by Professor Charles Case.

He took the cases where there had been two trials on the same test, several months apart — usually near two years. Two tests had been used — the Ohio Literacy and the Morgan Mental Test.

The tables will be understood from the following explanation:

The cases were arranged by grades, and the average for each grade was found as indicated by the column headings.

For example, the first line of the table shows that there were three girls whose school grade was 3, who averaged 8 years 4 months old at time of the first test. The time until the second test averaged 23.1 months, of which 17.3 months was the average time spent in school (the rest was vacation time, not "absences"). During that time these children made an average increase of 3.3 school grades, or 3 years 9 months mental age, according to the results of the two Morgan Mental Tests.

That is to say, in 17.3 months of school work (less than two full years) the three girls had averaged, *not* less than two grades, but *more than* three years (3.3). Their mental age had apparently increased *not* two years — 23.1 months (the time that had actually elapsed) — but *three* years and *nine* months!

For the Ohio Literacy Test there were more cases. Here we find thirty-five girls in third grade who, in practically

the same time, made an average increase of 3 grades, and two years and one month's increase in mental age.

There were no data on the Morgan test above the fourth grade.

There were more data on the Ohio Literacy Test, although the time between the two tests in Grade 7 is too short to show any increase.

In Table 2, Professor Case has restated this conclusion in terms of a nine-months school year. It now reads as follows:

As measured by the Morgan test, the three girls averaged 1.7 grades' gain in one school year, and made an average increase of one year eleven months in their mental age, in the same time. The thirty-five girls made an average annual increase of 1.6 grades and one year four months of mental age, according to the Ohio Literacy Test.

A perusal of the table will show the results for the different groups to be fairly consistent. The conclusion seems justified that the methods of the special class and the special class itself are producing highly satisfactory results, not in appearances only, but as measured by standard tests.

TABLE 1

PART A. GIRLS

MORGAN MENTAL TEST

No. Cases	School Grade	Average Chron. Age at 1st Test	Average Time in Mos. from 1st to Last Test	Average No. Mos. in School	Result	
					Average Grade Increase	Average Increase in M.A.
		Yr. Mo.				Yr. Mo.
3	3	8–4	23.1	17.3	3.3	3–9
17	4	9–1	22.6	16.6	3.3	3–4

OHIO LITERACY TEST

35	3	8–10	22.1	17.2	3.0	2–1
27	4	9–2	21.5	13.6	2.3	2–4
10	5 and 6	11–8.5	16.5	11.7	1.2	1–6.3
10	7	12–3.1	5.4	2.4	0	0–0

Part B. Boys

MORGAN MENTAL TEST

No. Cases	School Grade	Average Chron. Age at 1st Test	Average Time in Mos. from 1st to Last Test	Average No. Months in School	Morgan Test Results	
					Average Grade Increase	Average Increase in M.A.
		Yr. Mo.				Yr. Mo.
17	3	8–7.7	24.4	19.4	3.6	3–8
21	4	9–5.1	18.1	13.9	3.0	3–1
	5 and 6					
	7					

OHIO LITERACY TEST

					Ohio Literacy Results	
						Yr. Mo.
24	3	8–7	22.1	17.4	2.9	2–10
26	4	9–5.5	17.4	13.0	2.2	2–2
19	5 and 6	12–1.6	12.0	8.0	1.4	1–2.3
10	7	12–10.2	6.7	3.7	1.3	0–10.4

TABLE 2

PART A. GIRLS

MORGAN MENTAL TEST			OHIO LITERACY TEST	
GRADE IN SCHOOL	INCREASE IN GRADE IN 9 MOS. OR 1 SCHOOL TERM	INCREASE IN M.A. IN 9 MOS. OR 1 SCHOOL TERM	INCREASE IN GRADE IN 9 MOS. OR 1 SCHOOL TERM	INCREASE IN M.A. IN 9 MOS. OR 1 SCHOOL TERM
		Yr. Mo.		Yr. Mo.
3	1.7	1–11	1.6	1–4.0
4	1.8	1–9.2	1.5	1–6.3
5 and 6	—	—	.92	1–3.0
7	—	—	0	0

PART B. BOYS

3	2.0	1–10.7	1.6	1–10
4	1.9	1–11.8	1.5	1–6
5 and 6	—	—	1.6	1–4
7	—	—	1.7	2–7.6

STANFORD ACHIEVEMENT TEST — HIGH I.Q. CLASSES

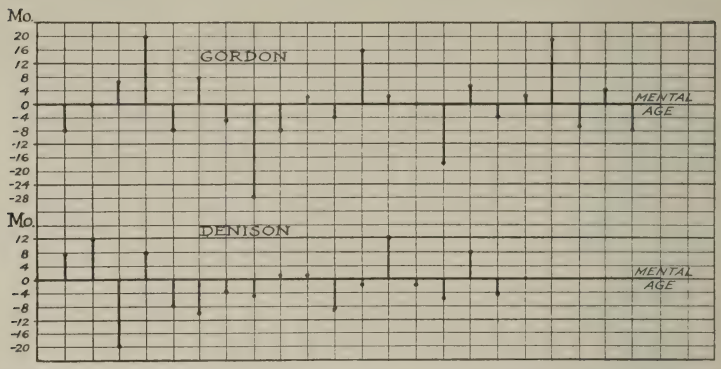
The following report of an early study on two classes has been furnished me by the Department of Psychological Research of the Cleveland Schools (Dr. Bertha M. Luckey, Director).

In November, 1923, the Stanford Achievement Test was given in the high I. Q. classes at Gordon and Denison schools. The class at Denison was organized in September, 1923, and is made up of children from the second and third grade. The class at Gordon consists of children from Grades 4 through 6, with the experience of one year in an accelerated class.

The Denison class was given the Primary form of the Stanford Achievement Test, which consists of Reading, Arithmetic, and Spelling examinations. The attainment in the test is expressed by an educational age which should be the same or higher than the chronological age if the child is normal mentally and doing work that should be required of a child of his age.

We found that in every case these children were doing in the three subjects work that is expected of children of their *chronological* age. Since these children are all above normal in mental ability, we estimated from our results how near they were approximating work of which they are mentally capable. This was found by comparing the educational age with their mental age. In seven cases the children were doing work equivalent to their ability as indicated by their mental age (Graph A, lower). The rest fell only a few months below; in only one case did the educational age fall more than one year below the mental age. This is a very good record for a class that has been organized only two months, and would indicate that they may expect a marked improvement after the advantage of a year in the high I.Q. class.

The Advanced Achievement Test was given at Gordon School. The same method of scoring is used, but there are more tests included. Subjects included are Reading, Arithmetic, Nature and Science, History and Literature, Language Usage and Spelling. The educational age reached or surpassed the *chronological* age in every case. In twelve cases the educational age reached the mental age (Graph A, upper). The average deviation of the educational age was two years and seven months below the mental age.



GRAPH A. Horizontal line, mental age. Each vertical line represents a child of the class. Its length shows in months how much above or below his mental age is his educational age or achievement. One space equals four months.

These children excelled in the reading test. Here the average educational age exceeded the chronological age by three years and three months, and exceeded the mental age by nine months. We may judge from our results that the class is doing excellent work in reading. The work in arithmetic is also good, the average educational age being two years and one month above the chronological age and three months above the mental age.

In the next two tests, Nature-Science and History-Literature, we found the average educational age for the former test one year five months above the chronological age, five months below the mental age; for the latter test, two years six months above the chronological age, two months below the mental age.

Although our average indicates that as a class the children were two years, ten months advanced in Language Usage and two years advanced in Spelling while only two months below the mental age in both subjects, the variation here indicates a marked unevenness in attainment among the individual children. In several cases the children are falling short of what they should be doing in these subjects.

Reading
Arithmetic
Nature and Science
History and Literature
Language Usage
Spelling
Composite Score
16
15
14
13
12
11
10
6A AVERAGE SCORES
GORDON
AVERAGE MENTAL AGE
Gordon 15 yr.

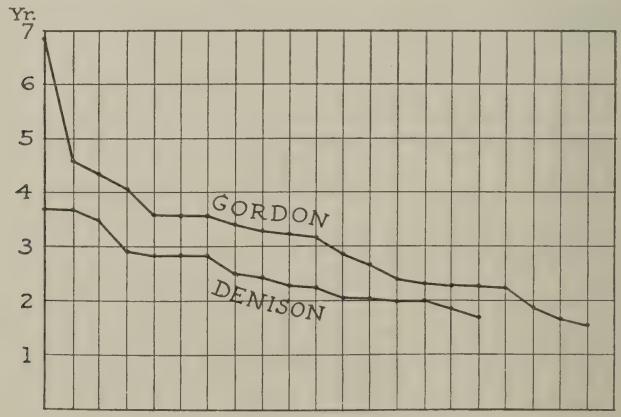
Reading
Arithmetic
Spelling
Composite Score
13
12
11
10
3A, 3B AVERAGE SCORES
DENISON-3A
DENISON-3B

GRAPH B.

For each child we have an individual graph[1] consisting of three curves. One is the achievement compared with that which is expected of a child of the same chronological age, another shows the achievement with the grade as normal, and the other shows a comparison with the child's mental age as normal. Since each child presents a different problem and since, for the most part, the curves are erratic (i.e., while going very high in one subject fall low in another subject), these individual curves are of most value in our results.

In both classes our results are very favorable and show a close approximation of attainment to mental capacity.

Graph C shows the standing of each pupil in the Gordon class and also in the Denison class in relation to his age (chronological), as measured by *achievement* tests. For example, the first boy of the Denison group passed achievement tests that are almost 7 years above his age. The next pupil is $4\frac{1}{2}$ years above his age. And so on for the entire group, the last one being only $1\frac{1}{2}$ years above. Curves drawn with the *mental age* as the basis of comparison are not shown here.

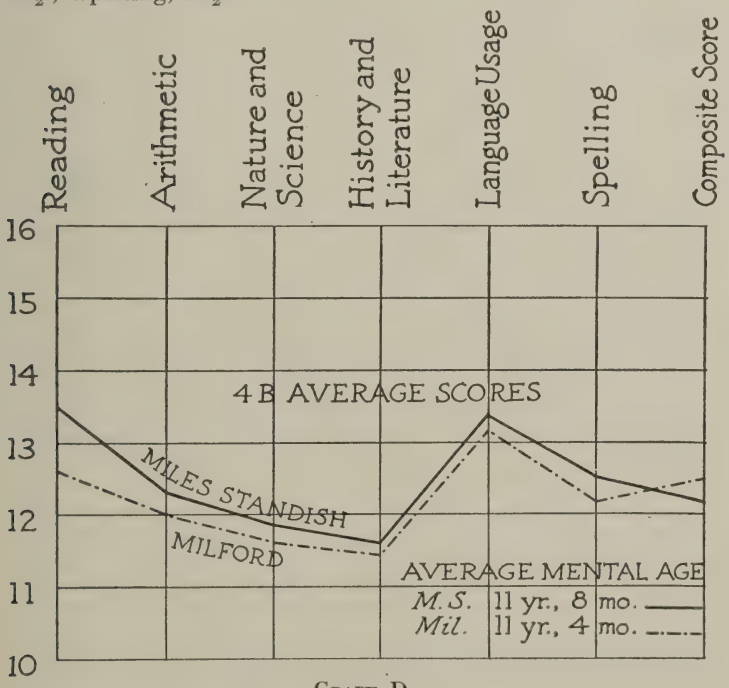


Graph C.

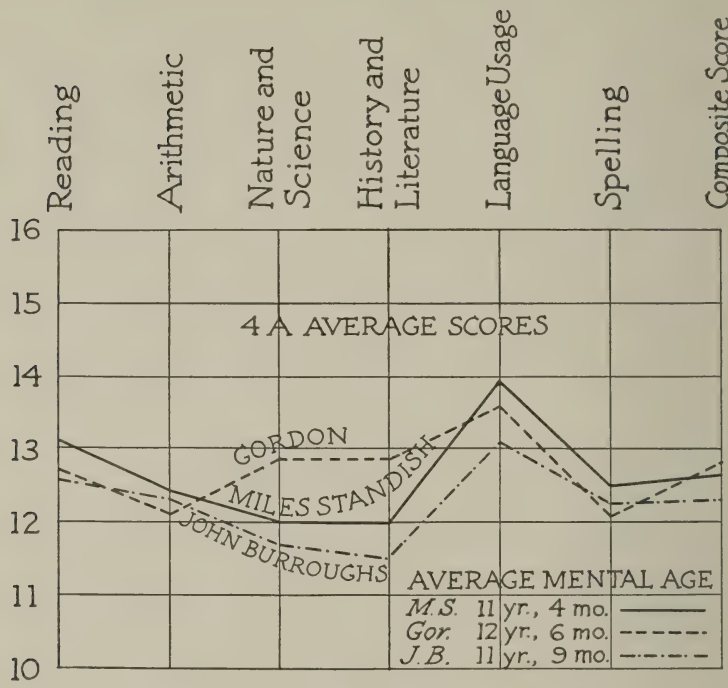
[1] Not reproduced here.

They have a similar appearance but do not run as high above the base line.

The following curves (Graphs D, E, F, G, H) are interesting as showing the average achievement ("educational age") of the various classes in each principal school subject. Individual curves have been drawn for each child. They are not reproduced here. They show the same kind of deviations as these averages. Figures at the side mean years. The graph is read as follows: The Miles Standish class 4B grade averages in Reading an achievement equal to that of a standard of $13\frac{1}{2}$ years; in Arithmetic, about $12\frac{1}{4}$; in Nature-Science, below 12; History, above $11\frac{1}{2}$; Language Usage, $13\frac{1}{2}$; Spelling, $12\frac{1}{2}$.



Graph D.

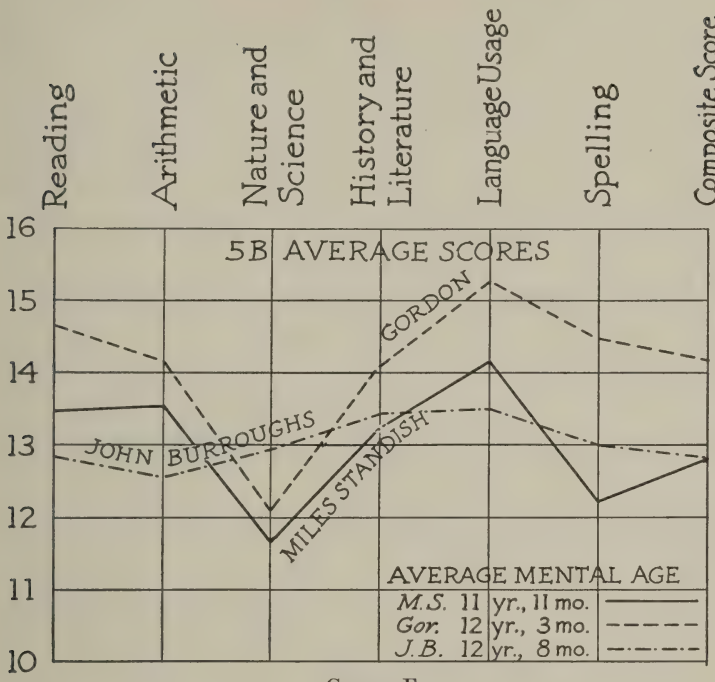


Graph E.

These achievements are to be considered in connection with the fact that the average *Mental* Age of this Miles Standish Class is 11 years 8 months. Therefore they are doing better than even their mental age would warrant us in requiring. They are, of course, *far* above their chronological age.

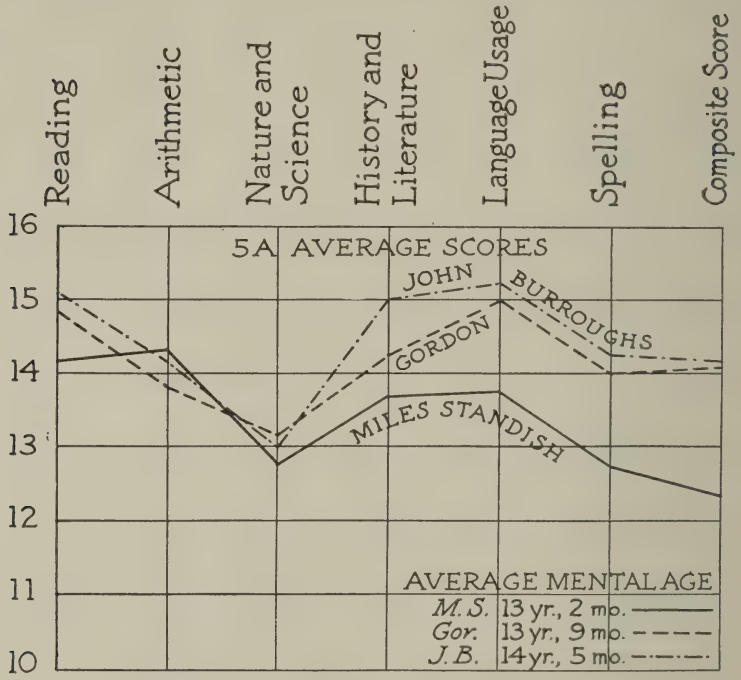
A COMPARISON OF THREE GROUPS OF GIFTED CHILDREN

A study has been made for the purpose of comparing children in the special high I.Q. class with bright children in other junior high schools in the city, not in such classes.



Graph F.

Group A was brought together and taught as a special high I.Q. class. Group B was not segregated, but the principals and teachers were to be informed of the selection of these pupils for the purpose of observation and study. No recommendation was made to principals as to any specific form of treatment to be accorded to this group. In the case of Group C no information at all was given. These last two groups were to serve as a check or basis of comparison for the results secured in the segregated group. Unfortunately the principals who were told of the experiment did not inform their teachers or single the children out for any special attention or activity. With the exception of Patrick Henry



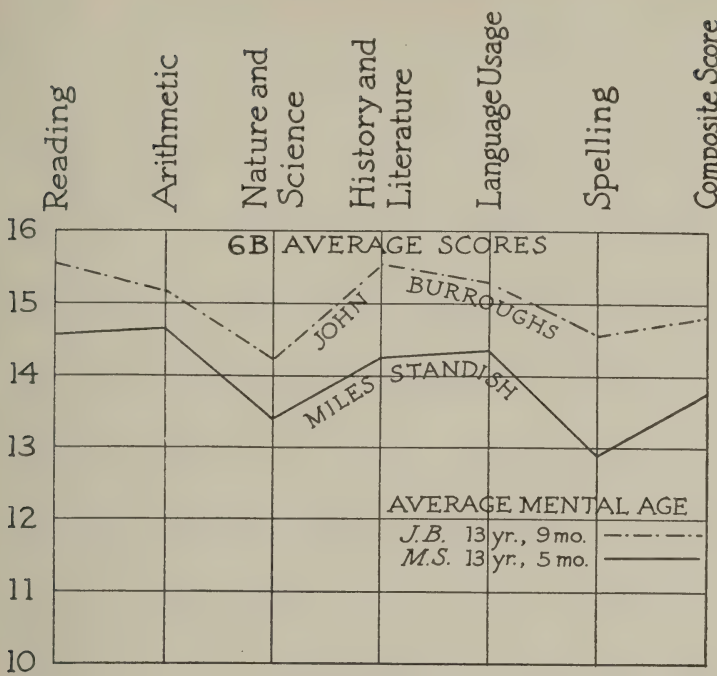
Graph G.

School, where the children selected happened to fall in an accelerated group, the treatment of Groups B and C was identical.

The range of I.Q. was as follows: Group A, 111–147; Group B, 115–150; Group C, 115–139.

The conclusions from this study are of interest. We quote from the report of the study:

> The comparison of the three groups shows only slight differences. Their interests and activities remain parallel except for the augmented curriculum of the high I.Q. class. Group A pupils are not allowed to slip by; they are constantly prodded and compared with



Graph H.

other groups in their school. They are shown continually their weaknesses as a group. This is encouraging their social unity. They are working together more harmoniously, recognizing each other's abilities and their own faults. On the other hand, although some of the pupils in Groups B and C are good students, for the most part they are lazy and do not apply themselves. They are getting little or nothing outside of school to stimulate their minds. Those who are ambitious and feel the need of some interest cannot fill in the gap themselves, through lack of knowledge of how to gain experience; so their activities are random and generally unsuccessful. The feeling is that most of the children with I.Q.'s above 125 would profit by a high I.Q. class.

SECTION F

A Japanese Genius

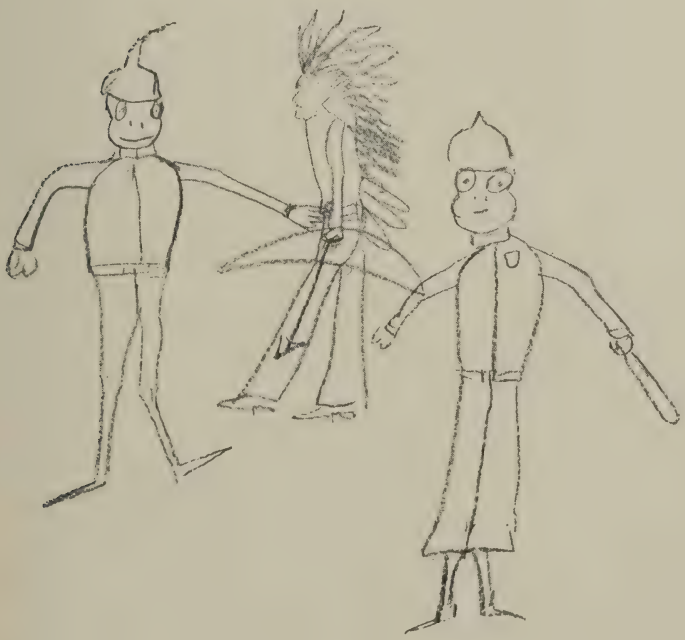
Who that has seen them or the reproductions has not marveled at the drawings and carvings of prehistoric man as found in the caves of southwestern Europe!

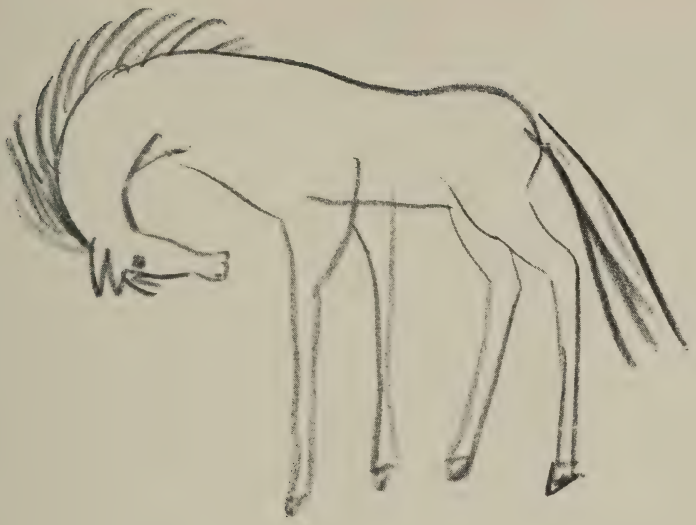
We are learning from several sources that modern children can do the same if allowed freely to express themselves.

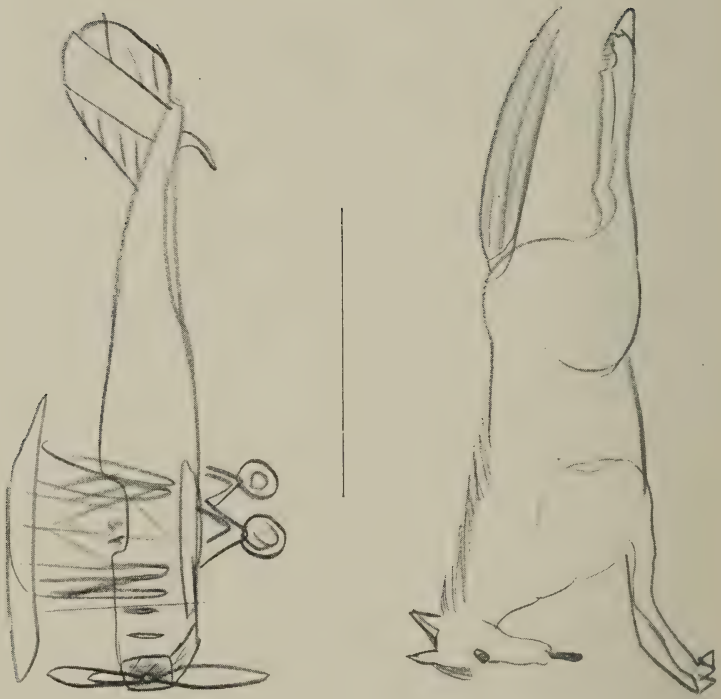
The accompanying pages show reproductions of the drawings of a six-year-old Japanese boy. The originals were made in the writer's presence in a kindergarten in Honolulu on June 6, 1927. The boy was born April 8, 1921. His name is Geu Komenaka.

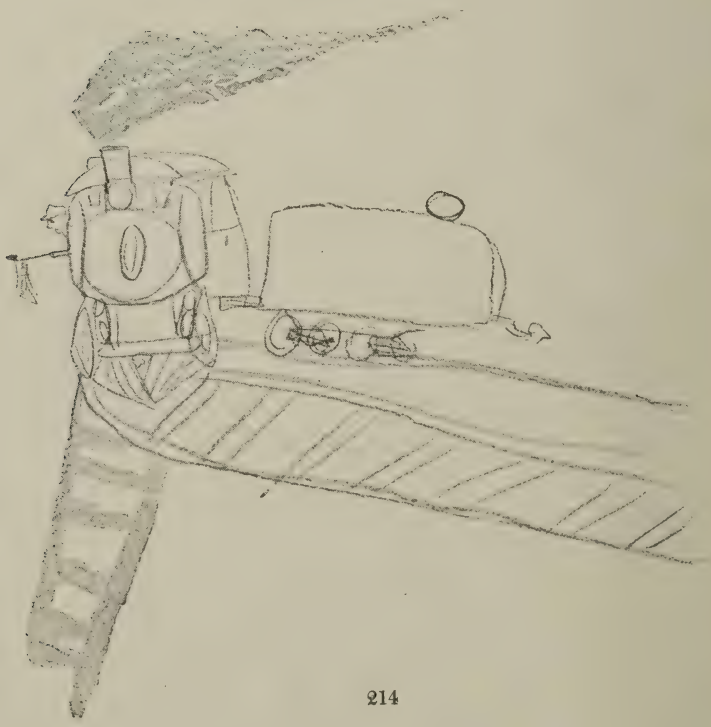
When we discovered him he was drawing for his own pleasure, on the blackboard. From across the room I saw him draw a wavy line on the board. Instantly I remarked that that looked like the back of a bear. The next moment the boy had finished the bear. We then asked if he could draw on paper so that the drawings might be preserved. Apparently he was accustomed to this, for paper was at hand — ordinary paper in sheets 18 by 24. With a brown crayon he proceeded to draw whatever he pleased — a great variety, including animals, airplanes, automobiles, bicycles, birds, Brownies, etc. He seemed to be equally interested in all of them. He drew horses, cows, bears, elephants — all with equal facility and equal skill. His elephants were quite as wonderful as the horses reproduced here.

The drawings were sketched rapidly — one or two minutes for each one — no line was ever erased or gone over a second time. The picture was never touched up, but as soon as finished it was laid aside and something new begun. Once only we suggested what he should draw. He drew it as readily as any of the others.









The size of the original drawings ranged from approximately nine inches to fifteen in the greatest dimension.

Asked who taught him to draw, he replied that an older brother (some one else said it was an uncle) had shown him. As the kindergarten closed the next day, I had no opportunity to study the case further.

The drawings are not from life, and it seems probable that they are not from memory of "life." It seems more than likely that the "older brother" had amused the boy by "drawing pictures" for him and the boy had reproduced these from memory — a sufficiently remarkable performance even then. This point I hope to clear up later. The Brownies, of course, fit this explanation, unless it could be shown that their positions were original with the boy. On the other hand the locomotive *seemed*, as one watched him draw it, to contradict this hypothesis. He drew the front end of the locomotive first and the track straight to the front. Then he drew the tender, showing side view. Next, as though he felt the incongruity of the engine head on, with side view of tender, *he put a curved track under the whole thing.* His "older brother" *may* have done the same thing, but it is doubtful.

Moreover, the boy is not merely a genius at drawing. He is recognized by his teachers as "very bright at everything." We saw the children going through a dramatization that they had learned. This boy played his part with an originality, a spontaneity, and an appreciation of the situation, with an intelligent adaptation both to the meaning of the play and the limitations of the improvised stage, that were fully as amazing as his drawings.

His career will be carefully watched by interested teachers, the sponsors of the kindergarten, and some Honolulu artists.

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